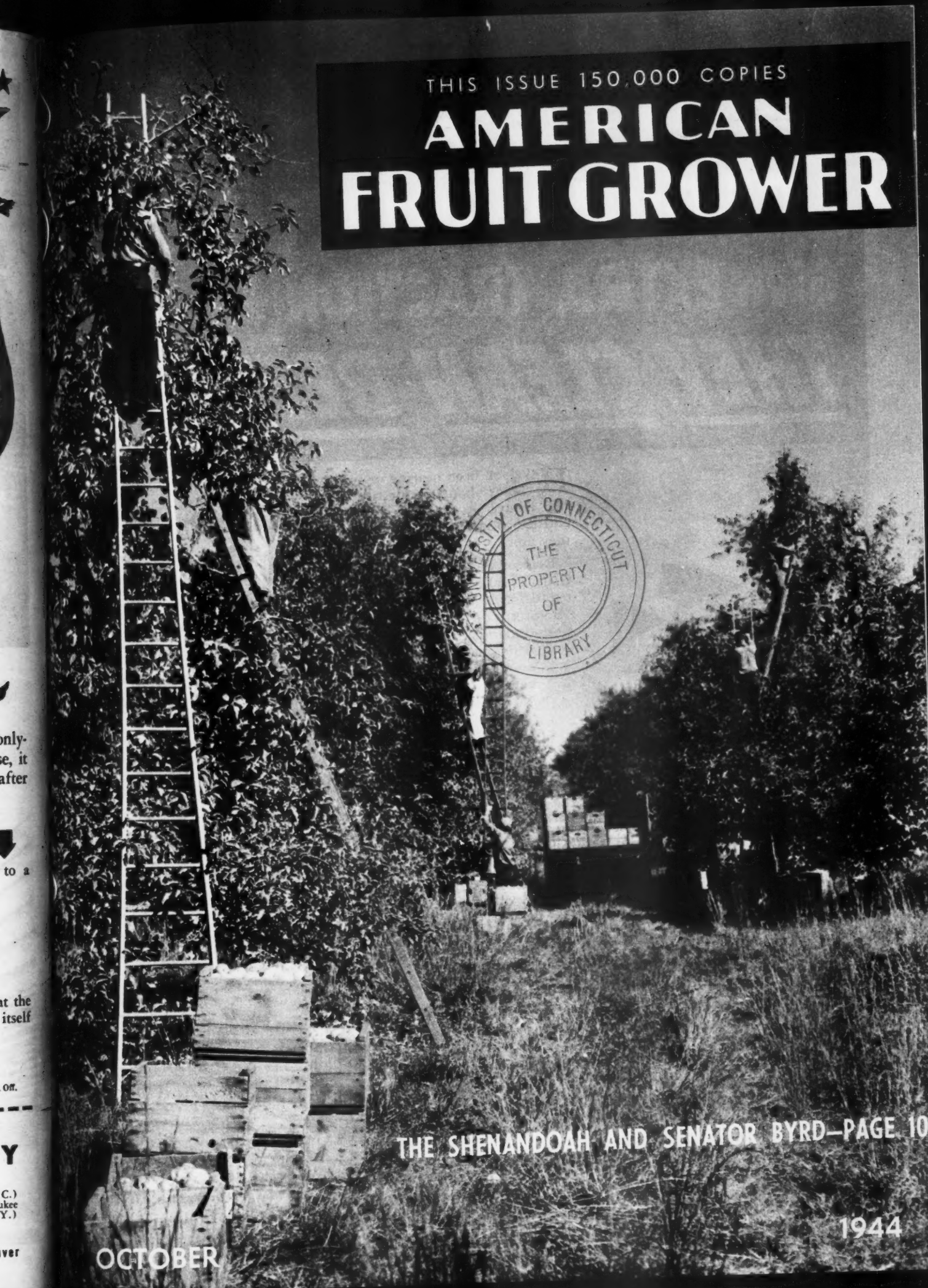

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Give EXTRA TRACTION because
THEY CLEAN BETTER!

HAVE you been hearing or reading claims about tractor tire cleaning lately? As a farmer, you are entitled to know the facts. And here they are:

Remember that the Firestone Ground Grip Tread is *patented.* Its extra-long, triple-braced traction bars do not have "broken center" traction leaks, no trash-catching stubs or buttons. The wide spaces between the bars clean easily, even in soft soil, because there are no corners or pockets for mud to stick or hide. No wonder Firestone Ground Grips clean so much better in ALL soil conditions!

And don't forget that Firestone Ground Grip Tires give you up to 215 *extra* inches of traction bar length per tractor. That means *extra* pulling power — and the more pulling power you get, the more time and money you save!

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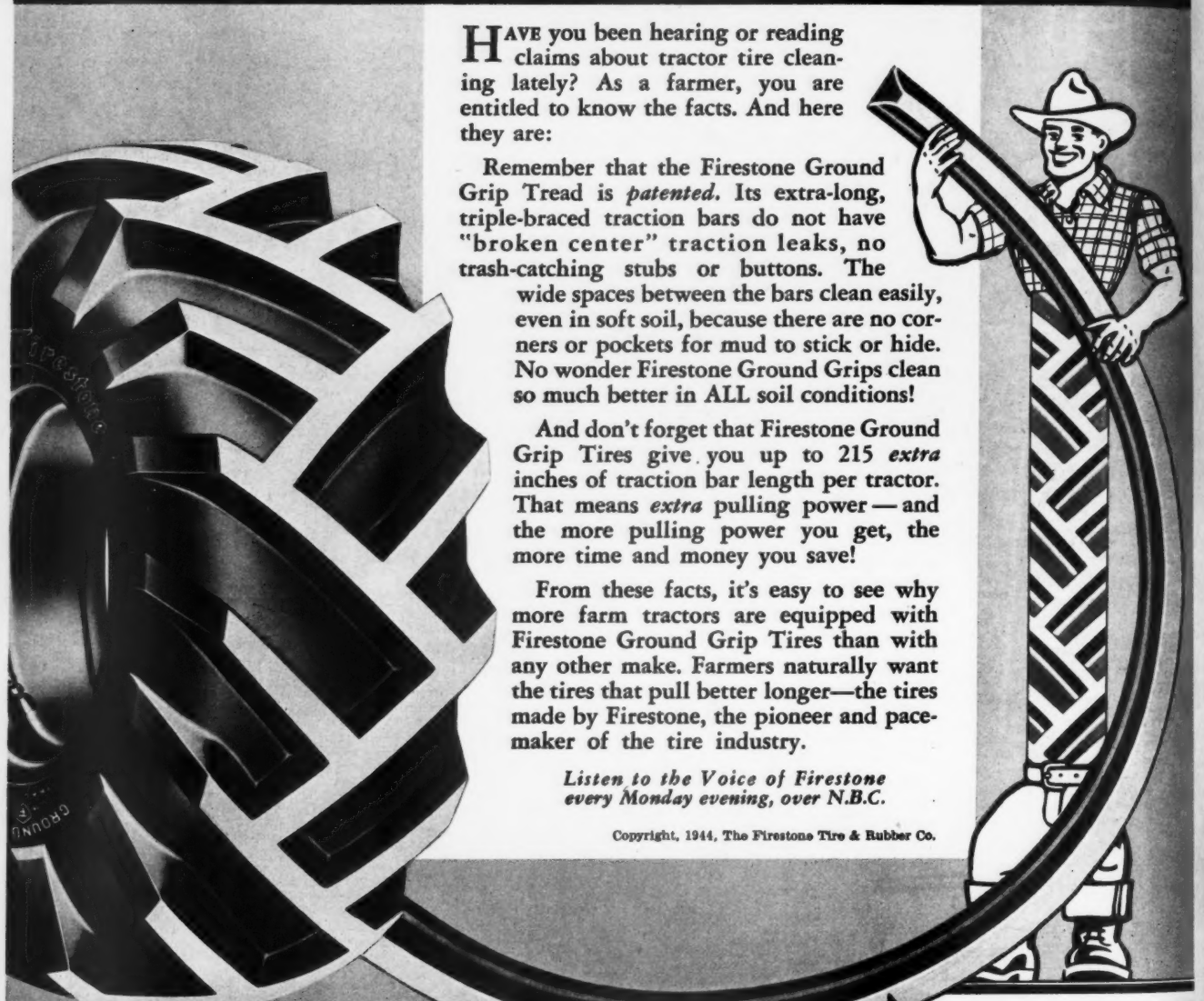

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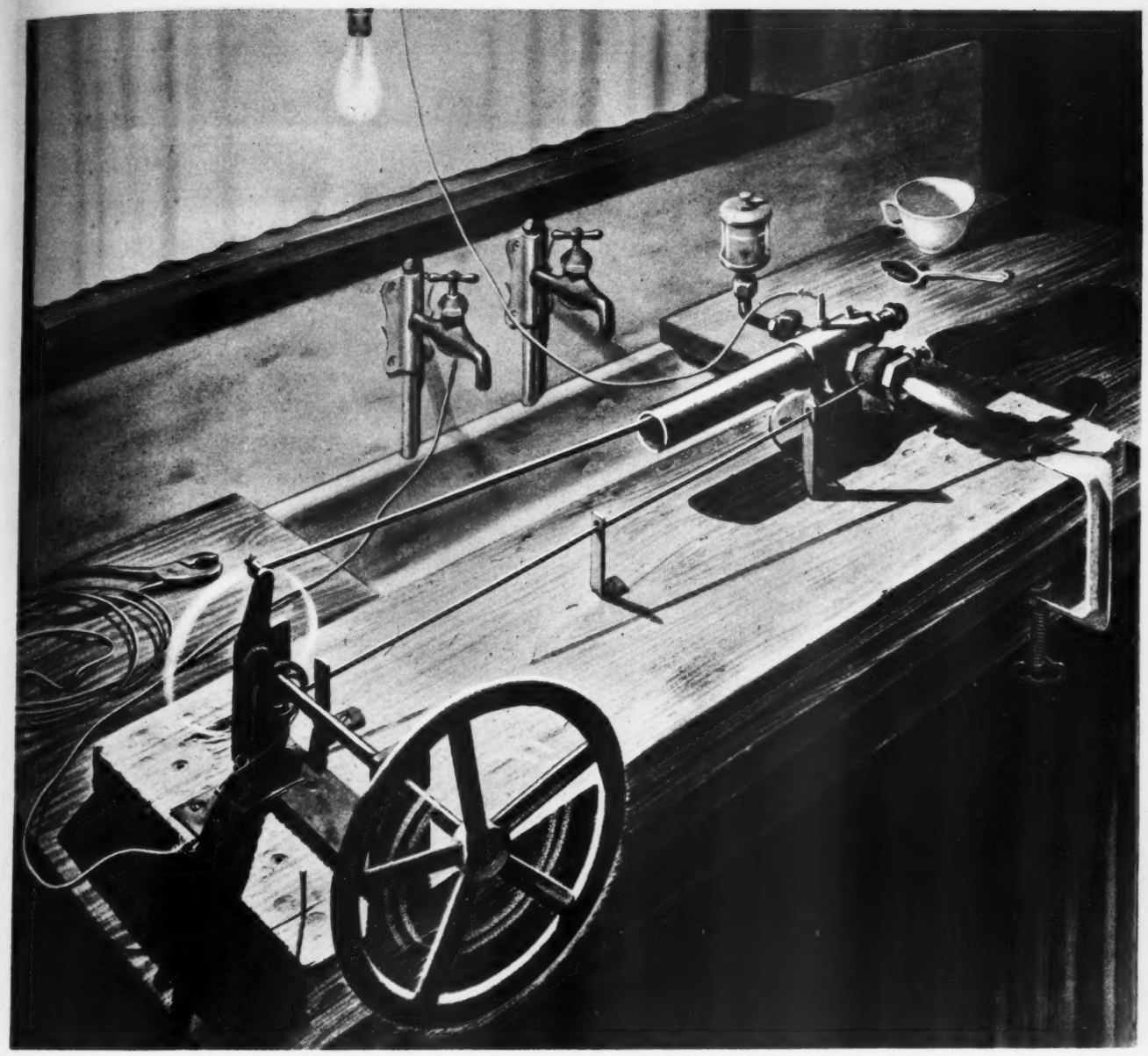
Vol. 64, No. 10. AMERICAN FRUIT GROWER, published monthly by American Fruit Grower Publishing Co., 1370 Ontario St., Cleveland 13, Ohio. Subscription rates: Domestic, except Cleveland, 3 years $1.00. One year, 50 cents. Cleveland, Canada and foreign, $1.00 per year. Single copy, 10 cents. Entered as second-class matter at Post Office at Cleveland, under the Act of March 3, 1879. Additional entry at Mount Morris, Illinois. Printed in U. S. A.



In the Ford kitchen . . . this little trial engine sputtered into life

IT HAPPENED far back—in the very early 1890's. In the kitchen of his Detroit home, a young engineer, named Henry Ford, was testing a principle of the internal combustion engine.

His apparatus, clamped to the kitchen sink, was a piece of one-inch gas pipe, reamed out for a cylinder—the flywheel, a handwheel from a lathe. Gasoline was fed from an oil cup. A wire connected to the kitchen light furnished the spark.

He spun the flywheel. Flame came from the exhaust, the sink shook and the trial engine was running under its own power. Mr. Ford was satisfied. He put the engine aside. It had served its purpose. His idea was proved.

But he did not stop to applaud himself. "The man who thinks he has done something," Mr. Ford once said, "hasn't even started." His mind was already stirring with thoughts of a new and larger engine for transportation use.

Just ahead lay the pioneering which was to produce the Ford automobile of world-wide use. Ahead lay the creation of the first industrial assembly line, hundreds of inventions and improvements, the building of 30,000,000 low-cost motor cars and trucks to serve the needs of *all* the people.

Today, at Ford Motor Company the pioneering still goes forward. New methods, new materials, new devices are continually being developed. Outsiders don't hear about many of these important advancements, because Ford assignments now are subject to military restrictions.

But one day the story of this modern pioneering *can* be told. It will be told, you may be sure, through the medium of Ford, Mercury and Lincoln cars so advanced in both style and engineering that new millions will seek to own them—for comfort, for smartness, for reliability, and for economy.

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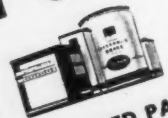

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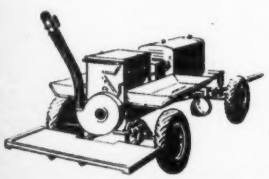

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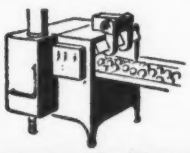

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WHAT A SEASON! America's fighting farmers did it again. More food raised to win the war. Big yields of all kinds of crops bear testimony to a mighty job that's done. The harvest is coming in. Now to get it to market.

Never have farmers faced a tougher transportation problem. War traffic is hitting an all-time peak. The rails are loaded. Farmers' trucks have more to haul than ever before. They've got to keep on hauling, they must have *special* care.

Check your truck now. What does it need? Make a list. Everything that can be done must be done to keep your truck in first-class shape. Use the service facilities of the International Truck dealer.

Harvester has mobilized its dealers to do the biggest service job they ever have done. Just as McCormick-Deering farm equipment dealers are sparing no effort to keep your farm machines on the job, the International Truck dealer is also giving *special* attention to every possible truck-repair job.

Whatever your truck needs, from a set of plugs to a major overhaul, call on the International dealer. He'll use genuine IHC parts—the best—and put your truck back on the road, hauling for all it's worth. International Service will help pull you through.

HARVESTER

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INTERNATIONAL TRUCKS

LETTERS TO THE EDITOR

Hare and Tortoise

Gentlemen:

I own three farms near east central Illinois. In operating these farms, which are about six miles apart, we have arranged each field exactly the same on each farm—that is, each farm is farming the same amount of each crop grown. Three years ago we purchased three tractors with equipment exactly the same for each farm. Oil changes were the same at regular intervals. However, we decided to operate one farm tractor with governor wide open, which somewhat speeded up operations. After two years operating, we found our expense repair bill on this tractor was $122.50; expense repair bills on disc harrow and other equipment on the same farm was $62.75.

The second farm was operated with tractor at moderate speed, and we find expenses were cut just in half on this farm. Now, on our third farm where the tractor was operated at slower speeds at all times, we have not had either tractor or equipment in for repairs at any time. All equipment on this third farm seemingly will run another two years without repairs.

While we did not get over as much ground with our third outfits and it often took an extra day or two to get some of the crops in and cultivated, we believe by conservative operating as in our third farm operations, the farmer is financially better off.

Let us have the opinion of some other farm operators who keep records.

Quincy, Ill. John W. Morris

Our favorite scheme is that all passenger cars made after the war should have governors limiting speed to 50 miles an hour. We believe this would prolong the lives of cars and people without curtailing actual speed too much. Grower Morris's experiment confirms this conviction.—Editor

Mango Varieties

Dear Sirs:

In the August issue of the *American Fruit Grower*, under State News, I noticed that they had a big display of mangos in Florida but no address of where they can be bought. We are interested in a ranch in South America and would like to know where we can get seeds or grafted trees of improved varieties of tropical and semi-subtropical fruits to send down there.

Ephrata, Penna. Elmer J. Martin

Mr. Martin should write to the Florida Experiment Station at Gainesville, Florida. They will tell him where he can obtain these improved varieties.—Ed.

Seedless Raspberry

Dear Sir:

In looking through your July issue, I noticed the article on fruit breeding. I also noticed the fruit pictures consisting of the raspberry. Well, I have a raspberry that makes a crop in the Spring and one in the Fall. You can pick raspberries on Thanksgiving Day, and I can go one better than that. They don't have any seeds in them. Do you think I've got something?

Dallas, Ga. W. O. York

We'll say you have!—Ed.

Summary of Bulletin 290

Dear Editor:

I have a block of 100 five-year-old Spy trees and would like to try girdling. Would you please send me Station Bulletin 290 or the summary sheet. I find your magazine very helpful.

Plymouth, Mich. Mrs. F. D. Bacon

Mrs. Bacon has been sent the summary sheet to Bulletin 290.—Ed.

Mexicans in Idaho

Dear Sir:

Idaho fruit ranchers faced with many wartime problems sighed with relief when the labor question came up, for thousands of Mexicans have been imported into the Pacific Northwest by the War Food Administration.

This past summer Mexicans were instrumental in saving the bumper cherry crop in Emmett Valley. Farmers found them efficient and willing workers. Mexicans work under Government supervision, either by contract or for 60 cents an hour.

Twin Falls, Idaho Richard A. Ramme

(Continued on page 16)

Mexicans employed in Idaho's Emmett Valley cherry harvest helped save the bumper crop.

The simplest, sturdiest and most dependable spray pump built.

EXACTLY what you want for BETTER SPRAYING

You get surer crop protection with a "Friend" Sprayer, because it gives you—

Steadiest High Pressure. You never spray with a leaky pump, as the "Friend" packing is adjusted instantly from the outside. "Instant-Clean" valves, with threadless seats.

Unequalled Reliability. Only ½ to 1/3 as many moving parts as other high-pressure spray pumps. No wear whatever on the pump's cylinder walls. Complete lubrication, including the plungers.

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Tractor Trailer sprayers, 4-wheel Cutunders, Truck Sprayers, and all other good chassis styles—in a complete range of sizes, and pressures up to 1,000 lb.

Dusters with the same Reliability as "Friend" Sprayers. For large acreage, the "Friend" Unifeed. Also low-cost utility models.

Sizers and Cleaners for every need — from large commercial equipment to small growers' models. No other sizers give the fruit such gentle handling.

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Easiest to Maintain in Working Order--
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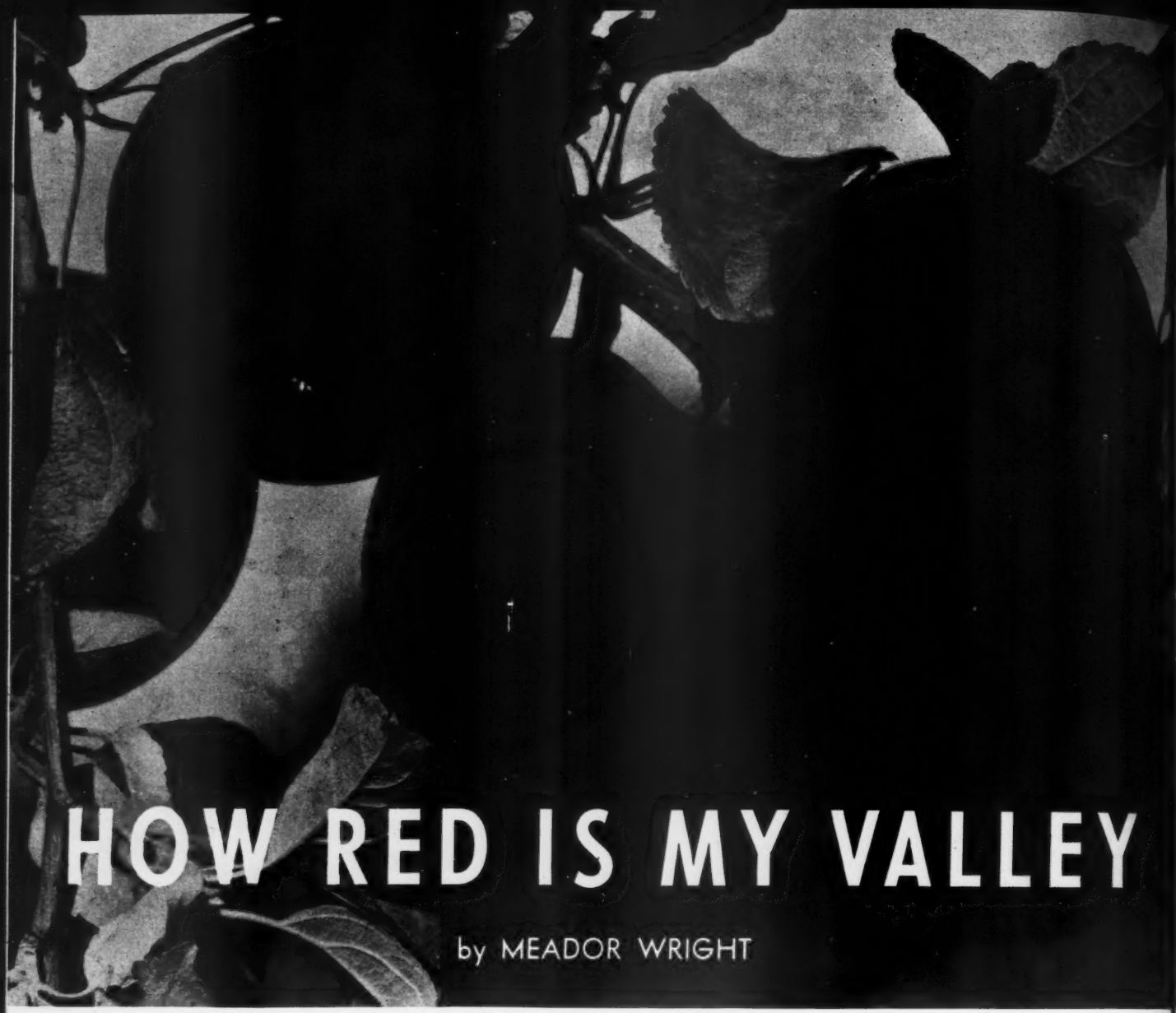


HOW RED IS MY VALLEY

by MEADOR WRIGHT

Senator Byrd's utilization of the color sport promises to make Virginia's Shenandoah Valley one of the greatest apple growing regions in the world.

ONE of the Greek rulers who followed Alexander the Great was once discussing the subject of ambition with the foremost philosopher of his province when the latter asked the king to state the full extent of his own ambitions. "I would like to reconquer," said the king, "the whole empire of Alexander including India. Then I would march against Carthage, cross over by way of Sicily and subdue all of Italy. I would then conquer Britain, Gaul and Germany and return in triumph to my home city." "What would you do then?" asked the philosopher. "Oh," said the king, "I would spend the rest of my days in my beautiful gardens carrying on learned discussions with wise men." "But that," reminded the philosopher, "is just what you are doing now."

A somewhat similar dialogue might have taken place between Harry Flood Byrd and one of his neighbors when the former left his apple growing in the 1920's to launch a civic career that has taken him practically to the top of the ladder, save the Presidency. Whether such an argument might have dissuaded him from a political career is uncertain, but what is certain is that Byrd never had any idea other than to return to the apple growing that brought him his first fame and fortune.

Today, in fact, it is hard to say by which he is the better known: as the world's largest apple grower or the most resolute and effective opponent of President Roosevelt's New Deal. In the former capacity he raises approximately one percent of all the apples grown in the United States; in the latter he is the rallying point of millions, both Democrat and Republican, who fear the bureaucracy that has grown up during the Roosevelt administrations.

We spent two hours riding with Senator Byrd over his orchards and packing plants, and we came away hardly less enthusiastic than he is for the beautiful Shenandoah Valley and the splendid apples it produces. We didn't see all his orchards. It would have taken a couple of days to have inspected all of them. But we did drive around and through the Berryville orchard with its 1,500 acres and 70,000 bearing trees, and the much discussed color sports orchard in Jefferson County, West Virginia, with

40,000 trees. Another orchard at Timberville, Virginia, is approximately the same size—1,000 acres and 40,000 trees. The Turkey Knob orchard at Mt. Jackson has 500 acres and 20,000 trees. The Bunker Hill orchard in Berkeley County, West Virginia, has 8,000 apple trees and a sizable quantity of cherries and prunes. Nearby is the Romney orchard with 400 acres planted to apples with 16,000 trees, and 100 acres in peaches. The Apple Pie Ridge orchard of 200 acres and other scattered plantings bring the total of exclusively Byrd-owned apple trees to over 200,000 planted on approximately 5,000 acres, most of it the rich limestone land of the Shenandoah. This fall he is planting 10,000 more trees on 250 acres of valley land adjoining the Jefferson County orchard. He bought this farm of 300 acres last spring for $125 an acre.

Generally speaking, Senator Byrd values his producing orchards at $500 an acre. He keeps on buying land and planting orchards because he thinks the whole Shenandoah apple district extending from central Virginia well up into Pennsylvania and touching West Virginia and Maryland is one of the best in the world. Its limestone soil and mild climate make it better fitted for apple growing, relatively, than for other crops, he thinks. By keeping on planting he is setting an example for his neighbors to follow. His apple growing business is conducted in a goldfish bowl, so to speak. His neighbors know just how much his yearly production is, his exact planting and cultivation methods and approximately his costs and profits. He feels an obligation to give these facts since he wants his apple growing proselytes to enter the business with their eyes wide open. Years ago he got to the stage where personal profits meant less to him than the feeling of satisfaction that he had pioneered in bringing additional prosperity to an area he loves with an almost primitive devotion. "A Virginian," he says, "may renounce most of the things about his state, but he will never renounce the Blue Ridges or the valley that lies between them." One of his proudest accomplishments as a Senator was getting through the law establishing the Shenandoah National Park, and the Skyline drive extending from near his home to the Great Smokies of North Carolina.

When Senator Byrd planted his 1,000-acre color sports orchard in 1937, when the export business in apples had already begun to dry up, much comment was heard about his courage in expanding his business in the face of a declining market. Some even rated him a speculative plunger, gambling on a break that the more conservative could not see on the horizon. Actually, Byrd paid not too much attention to the law of supply and demand in apples. He was simply betting on the Shenandoah Valley and its ability to produce apples better and cheaper than most other sections of the country. He knew that if apple production should exceed consumption over an extended period, some of the production would have to be curtailed. But he felt reasonably certain that it would be production in areas less advantageously situated as to soil, climate and market that would have to go. With a better insight into the economics of apple growing than most, he knew that any given area—like Washington state, for example—had enough suitable land available to produce half the total consumption of the country if the price factor over a period of time should be favorable enough. The Shenandoah area, he believed, when the cost factors of irrigation and the long distance haul were eliminated, could produce apples as cheaply as the Yakima or Wenatchee. On this basic assumption it was only natural that he should keep on planting trees and urge his neighbors to do the same. When he started raising apples, Winchester had been a larger market than Wenatchee. Why shouldn't it become so again? Such competition is logical in an economy of free enterprise which he endorses so wholeheartedly.

(Continued on page 10)

Senator Byrd with his grandson, Harry III, on inspection tour in his orchards.

There was another major factor involved, however, when he planted the Jefferson County orchard—the color sport. The main reason Washington had gone ahead of Virginia in apple production, Byrd felt, was because of the more attractive appearance of its fruit. The almost continual sunshine in irrigated areas together with the exact amount of needed water, tended to produce a prettier and better colored apple than seemed possible in Virginia. But here plant breeding came to the aid of the Shenandoah. The color sport was developed, brought about to a considerable extent through legal protection initiated in Congress by Byrd, himself.

By 1936 Byrd was pretty well convinced of the value of the color sport, but before planting them on a large scale he started an investigation that was historic in its completeness. He wrote to pomologists in every agricultural experiment station in the country, to experts in the U. S. Department of Agriculture, and to leading growers and marketers. In these inquiries he sought assurance from every angle—whether the fruit would drop early, whether it would keep properly, and whether it would be more susceptible to storage scald. After digesting an encyclopedia of information, Byrd was thoroughly convinced of the correctness of his earlier belief. Henceforth he would plant nothing but color sport varieties. It was the Shenandoah's answer to the Pacific Northwest.

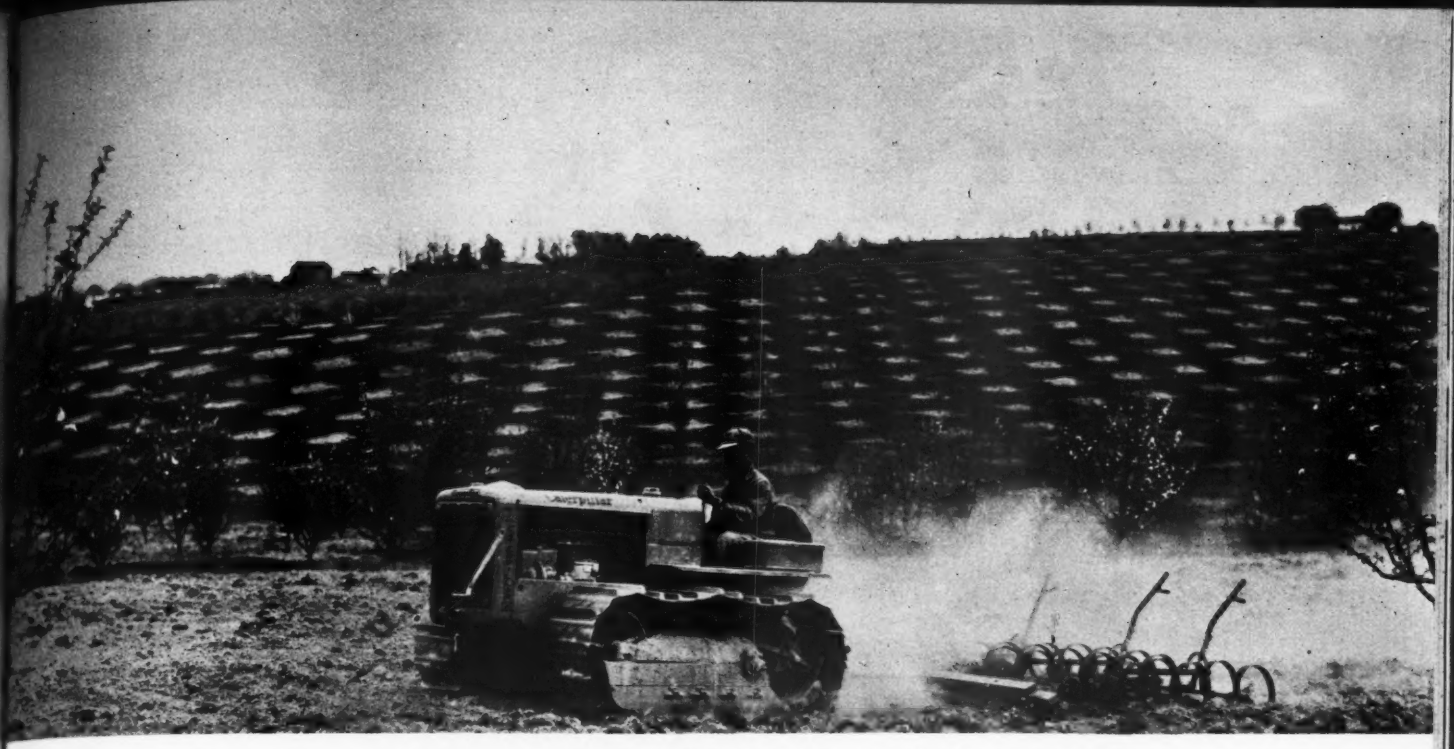
In the meanwhile he had purchased four farms totaling over 1,000 acres near his Berryville home, but across the West Virginia line in Jefferson County. This was land originally part of the estate of a little-known Washington with the rather startling given name of Bushrod. A son of Lawrence Washington and hence a nephew of George, Bushrod built a home even larger than Mount Vernon, but lacking its architectural distinction. The approach, however, is magnificent—through a winding roadway of virgin white oak forest a half mile in extent. Byrd offered to buy the home for his oldest son, Harry Flood, Jr., who turned the offer down. It was too big and he preferred to dive in Virginia.

We got an example of Byrd foresight and caution, however, in driving over the 1,000 acres he did buy. Adjoining it we noticed a small but beautiful apple orchard of huge trees many years old and asked the Senator if that also was his. "No," he replied, "but it prompted me to buy the other land. I knew from this that the land was especially well suited for apples."

The whole orchard of 40,000 trees was planted in 1937 and has made something of a record by producing a crop this year. Byrd estimates this crop at 25,000 bushels although a great deal of it is on Golden Delicious trees which comprise but a small percentage of the total planting. There are enough of the other varieties, however, to show that the color sports are breeding true.

Trees in this new orchard are planted in 34-foot rows with trees 33 feet apart. Byrd is especially careful about pollination, and varieties are alternated to produce the maximum. First there are four rows of York Imperials and Winesaps, the varieties alternating in the rows. Then come two solid rows of red Delicious, a single row of Golden Delicious and two more rows of red Delicious. Filling out the 13-row units are four rows of Stayman and Rome Beauty, the varieties being alternated in the rows. This is repeated throughout the whole huge orchard. This rather complex system was worked out to insure maximum pollination, especially for Delicious which needs a lot of it. Each tree is within bee distance of three pollinators. Beehives are carefully placed in all Byrd orchards every Spring. The Berryville Orchard, with 1500 acres and 70,000 bearing trees,

Experienced pickers harvesting a bumper crop in the Byrd orchards.



A panorama of young orchard. Note the mulch in the orchard in the background.

has been for years the mainstay of the Byrd apple empire. In 1942, 600,000 bushels of apples were picked from it, of which approximately half were packed and shipped. Yield from all Byrd orchards that year was 1,200,000 bushels. This year's yield will be somewhat less due to persistent dry weather in the Valley, but the Byrd sales manager, Lester D. Arnold, expects to pack and ship a much larger percentage than the bumper crop of 1942. The set this year was nearly perfect and much thinning had to be done, but the drouth has reduced the size of apples and hence the yield. The age of trees in the Berryville orchard varies from 12 years to 40 and over. Some of these old trees are of huge size and produce prodigious quantities of apples during good years. The Senator pointed out a York Imperial to us that must have been nearly 40 feet in height. "That tree," he said, "will produce 125 bushels of apples regularly every other year, the York being an alternating variety." Since other trees around it were only slightly smaller and as heavily laden, we asked him about total yield for certain acres. His answer almost startled us. A given acre plot with 40 trees could be found, he thought, that would *produce an average of 100 bushels per tree in good years, or 4,000 bushels to the acre.* There are large areas that will produce as much as 2,000 bushels to the acre.

While Yorks are the heaviest bearers, Delicious are the most heavily planted. The percentage of varieties in the whole Berryville orchard is approximately as follows:

Delicious—20 percent
York—16 percent
Stayman—16 percent
Rome Beauty—14 percent
Winesap—12 percent
Jonathan—5 percent
Golden Delicious—5 percent
Lowry—5 percent
Greening—5 percent
Grimes Golden—1 percent
Ben Davis—1 percent

Of late years Byrd has urged his neighbors to limit their commercial plantings to a small number of varieties best suited to Shenandoah growing conditions. He lists Delicious, York, Stayman, Rome Beauty and Winesap as the five best, with Golden Delicious a possible sixth. He points out that it will be much easier to advertise and market this small number of varieties, hence concentration on them will help the whole area.

Near the Berryville orchard is located the huge Byrd cold storage and packing plant. Built in 1937 at a cost of 125,000 dollars, the plant, 145 by 270 feet, has storage space on the ground floor for 100,000 bushels of apples. On the second floor is the packing plant, which can take care of approximately 10,000 bushels of apples a day. The third floor attic is

(Continued on page 27)

Part of the packing crew that keeps approximately 10,000 bushels of apples a day flowing through the grading machine.

Branch of a well-cared for peach tree as grown at Dixon, New Mexico.

BASIC LEAD ARSENATE VERSUS ACID LEAD ARSENATE

A ROUNDTABLE DISCUSSION

By Some of the Country's Leading Authorities

Virginia

FOR the past fourteen seasons peach growers in Virginia have been advised to use zince-lime (zinc sulphate and hydrated lime) in all sprays containing acid lead arsenate. Growers promptly followed the recommendations on the use of zinc-lime in order to control arsenical injury on the fruit, foliage, and twigs. In the early years zinc sulphate crystals were used and as a rule the crystals dissolved by placing them on the screen strainer and washing them into the tank while filling. Some years later monohydrate zinc sulphate powder replaced the crystal form and recently zinc sulphate flakes have been used more or less widely. It was found in practice that many growers failed to dissolve the monohydrate zinc sulphate powder. When this material was washed through the strainer into the tank it nearly always formed hard cakes in the bottom of the spray tank and did not go into solution. Severe arsenical injury usually followed when the zince sulphate was not properly dissolved. The zinc sulphate flakes appear to go into solution more readily than the monohydrate form and for this reason many growers have turned to the flake form. In spite of the precautions on how to dissolve monohydrate zinc sulphate, (that is, sifting it slowly into the tank when tank is half full of water and agitating for five minutes before remainder of water is added) and in spite of the general precaution that the zinc sulphate must be completely dissolved in order to be effective as a corrective for arsenical injury, some growers have experienced more or less arsenical injury in the orchards of the extreme northern part of Virginia. In the Crozet area as well as in other large peach growing areas in the central part of the state, the zinc-lime mixture has apparently satisfactorily controlled arsenical injury each season.

In recent years a few growers in northern Virginia have turned to basic lead arsenate. The results with basic lead arsenate have been excellent from the standpoint of safety on the fruit, foliage, and twigs. Lime is used with the basic lead arsenate in equal amounts but zinc sulphate is omitted. As far as we have been able to determine, the curculio problem has not been important in the orchards in which basic lead arsenate has been used.

In other words, the curculio as an orchard pest in the extreme northern part of Virginia has not been difficult to control. On the other hand, in the Crozet area of Virginia as well as in central Virginia the curculio is a major peach pest. R. H. Hurt and M. L. Bobb of the Virginia Agricultural Experiment Station used basic lead arsenate in an orchard near Crozet and they concluded that basic lead arsenate had very little value as an insecticide against the curculio under conditions prevailing in that area.

Briefly, the situation in Virginia appears to be as follows: growers whose orchards have no important problem on curculio control have used basic lead arsenate satisfactorily but where the curculio has become an important pest basic lead arsenate failed to control it.—W. S. Hough, Entomologist, Winchester Research Laboratory.

New Jersey

Tests of arsenate of lead upon peaches are conducted by either the Department of Plant Pathology or Entomology.

On the Horticultural Farm at the Agricultural Experiment Station, there are several thousand trees of peaches used in peach breeding work. These, of course, have to be protected against such insects as the plum curculio.

For many years the New Jersey Station has recommended the following spray for peaches at the shuck split stage: 2 pounds powdered lead arsenate, 16 pounds fresh, high calcium hydrated lime, 100 gallons water to make. I have used this spray for many years upon many different varieties and types of peaches. There is never any arsenical burning where the material is properly applied. When applied with excessive directive force injury may result. Experience by actual tests have shown that some arsenical burning may result when less than 16 pounds of lime is used to 2 pounds of lead arsenate. The reason that burning is sometimes experienced is usually due to too little lime or too much force.—M. A. Blake, Chief in Horticulture, New Jersey Experiment Station.

Ohio

Our tests in 1944 were mainly to determine whether or not basic lead arsenate could be used safely on peaches without lime. Published results of work in Pennsylvania and New Jersey indicated that it had been used in this manner with satisfactory results. It was reasoned that elimination of the lime should increase its effectiveness against curculio. In four separate trials, one in Illinois, one in Indiana and two in Ohio, basic lead arsenate was used on peaches without lime. In the trials in Indiana and Illinois there was no evidence of arsenical injury. In one trial in Ohio the basic lead arsenate without lime caused a slight amount of injury which was comparable with the injury caused by the regular acid lead arsenate—zinc sulphate—lime schedule. In the second trial in Ohio the basic lead arsenate alone caused very severe damage to the wood and dwarfing of the fruit on the Rochester variety and moderate injury to Elbertas. The acid lead arsenate—zinc sulphate—lime schedule on adjoining trees caused only slight injury. This latter test was made on healthy eleven year old trees.

These variable results indicate that basic lead arsenate without lime cannot be generally recommended and that further investigational work along this line is needed.

As to curculio, the infestations were too low in all these tests to give any definite evidence as to the effectiveness of the control obtained with basic lead arsenate. This is a point on which at present there is too little information and which should be investigated more fully before basic lead arsenate is recommended for general use on peaches.—Harold Waters, Research Foundation, Ohio State University.

Michigan

Basic lead arsenate has been generally satisfactory under Michigan condition for curculio control and prevention of arsenical injury on peaches. Arsenical injury on peaches from basic lead arsenate occurs occasionally on trees in low vigor. On vigorous trees injury is extremely rare from this cause. The Michigan Spraying calendar has recommended two or three applications, depending on infestation, of basic lead arsenate —3 pounds for curculio control on peaches since 1940. Our previous recommendation was acid lead arsenate 2 pounds, zinc sulphate (25%) 2 pounds and lime 4 pounds.—Ray Hutson, Head, Entomology Department, Michigan State College.

California

The main use of arsenate of lead sprays on peaches in this state is for the control of the peach twig borer, *Anarsia lineatella* Zeller. Codling moth occasionally infests peaches in the pre-harvest period, but due to the arsenical residue problem substitute materials such as cryolite or zanthone are generally used for the control of this pest.

The timing for the control of peach twig borer is in the petal-fall period for the control of first brood worms and again early in May for the control of second brood worms. In both of these sprays only the basic type of lead arsenate (4 pounds per 100 gallons of water) is recommended, as the standard or acid type of lead arsenate too frequently causes severe tree injury. In the more arid interior valleys of this state some growers have used the standard lead arsenate in the early spray without much injury, but under unfavorable weather conditions tree injury is sure to occur.

Basic lead arsenate, which originated in this state, is generally used on all stone fruits, walnuts and almonds. This is most important in the coastal and near-coastal orchards where more moist conditions prevail.

In the first basic lead arsenate sprays used on peaches, wettable sulphur or low dosages of liquid lime sulphur are generally added for the control of mildew and brown rot.

Some experimental work has been done the past few years on the use of commercial "safeners" with standard lead arsenate on peaches and walnuts in the interior valleys but the work is not as yet completed.—Arthur D. Borden, Associate Entomologist, California Experiment Station.

Pennsylvania

Lead arsenate, herein referred to as acid lead arsenate, and basic lead arsenate are sprayed on peach in Pennsylvania for the plum curculio. As used in curculio sprays, they pro-

(Continued on page 14)

COMPARISONS OF BASIC AND ACID LEAD ARSENATES AGAINST PLUM CURCULIO ON PEACH IN PENNSYLVANIA

Treatment:	Average days of adult life on caged fruits and foliage: (1942)	Average number of eggs laid per female in caged fruits: (1942)	Average number of plum curculio larvae reared per 100 fruits sampled at the beginning of the first fruit drop: (5 year average)
Unsprayed	26	23	35
4 lbs. basic lead and 4 lbs. lime per 100 gallons of spray:	18	10	24
2 lbs. acid lead with zinc sulfate-lime:	13	7	18

BASIC LEAD ARSENATE VERSUS ACID LEAD ARSENATE

tect against the locust leaf beetle and several minor pests that feed on early foliage.

Basic lead arsenate has been used by some local fruit growers for 15 years. It is now used by approximately one-half of the peach growers in the southern counties at rates of 4 to 6 pounds per 100 gallons of spray. It is applied with equal parts of spray lime and usually in combination with elemental sulfur in two or three of the sprays at weekly intervals often starting at late petal-fall.

A few manufacturers have made basic lead arsenate available at a price per pound comparable to acid lead arsenate. However, the total demand is light and plant capacities can not be used profitably in making small batches of the material.

Fear of arsenical injury has been the sole motive for the use of basic lead arsenate in peach sprays. Basic lead arsenate is generally injurious when used without lime in this area. At least one brand has given arsenical injury when used with sulfur and lime during 1944.

Acid lead arsenate is used locally at 2 to 3 pounds per 100 gallons of spray with equal or greater amounts of zinc sulfate and with double or more quantities of lime. When properly mixed, these combinations have given excellent foliage with no marked arsenical injury to the leaves. However, arsenical injury is common on fruiting wood by late July after wet seasons. It is found first at the point of fruit attachment where it shows as a dark burn on the bark. Later, it appears generally as roughened bark on twigs of fruiting age. The injured areas are enlarged by growth of twigs later in the season; cracks sometimes develop in the bark and bleeding occurs from the deep injuries particularly after heavy rains in late autumn.

Acid lead arsenate sticks to peach wood more than to foliage while zinc sulfate-lime weathers off more rapidly in rainy weather. Additional sprays of zinc sulfate-lime have been suggested to follow soon after the last curculio sprays to reduce the wood injury from persistent arsenical residues. The need for such sprays is dependent upon the season. Arsenical injury takes place when prolonged humid weather occurs during or following soon after the sprays for plum curculio.

Flake, crystal and monohydrated forms of zinc sulfate are available for use with lime as arsenical injury correctives. These vary in zinc con-

(Continued from page 13)

tent from approximately 22 to 36 per cent. Most recommendations call for enough zinc sulfate to give ½ pound or more of metallic zinc per 100 gallons of dilute spray. The amount needed seems to vary with seasonal and sectional conditions. In Pennsylvania, two pounds of either form of zinc sulfate have given good protection against foliage injury under a wide range of weather conditions. The flake form is most easily handled.

Zinc sulfate is added directly to water at the agitator level in the sprayer as it does not wash well thru a screen. It is pumped for a few minutes until the solution clears. Fresh spray lime is then added (carbonated lime causes injury). When used in curculio sprays, lead arsenate and sulfur are added as filling is resumed. The agitator is kept running until the tank is emptied of spray.

The most frequent errors encountered where growers failed to secure protection against foliage injury by the use of this mixture have been: 1. Failure to rinse the tank after spraying with other mixtures; 2. The omission of either lime or zinc sulfate or both; 3. The addition of lime before zinc sulfate has dissolved (some of the old zinc sulfates caked and it was almost impossible to dissolve them in the tank); 4. Stoppage of agitation for long hauls thru the orchard or before spraying with the mixture.

A five-year study of the relative effectiveness of basic and acid lead arsenates was completed at Arendtsville in 1943. In order to subject treatments to uniform infestations, most of the tests were conducted in 1 to 3 rows beside woodlands. In four of the years, numbers of fruits before the June drop averaged between 3000 and 5000 per test tree. Two sprays were applied during 1942 and in other years the comparisons were based on 3 sprays beginning with petal-fall. A summary of the comparisons between these materials is given in the accompanying table.

In the years of the tests, most of the egg-laying in this area occurred between May 10 and 30. When rainfall during this short period was high in each of three seasons, acid lead arsenate at 2 pounds per 100 gallons of spray gave reduction in plum curculio injury superior to 4 pounds of basic lead. Differences in control were most apparent under the heavy infestation encountered in the light crop year of 1943 when fruits were most valuable. In that year, full crop trees sprayed with basic lead arsenate averaged near 50% infested by curculio 1 to 5 rows from borders and approximately 20 percent infested 5 to 20 rows from borders in 15 orchards surveyed at the beginning of the June drop. The early drop of infested fruits and the removal of injured fruits in thinning improved the appearance of the harvested crop and gave little reduction in yield except on light crop trees. The following severe summer drought reduced the curculio carry-over to a little more than normal. In these orchards, the 1944 curculio attack was brief and the harvested crop was the cleanest in many years but the curculio carry-over has not been reduced to safe limits where orchards border woodlands.

Noticeable improvement in the control of plum curculio was not obtained in 1943 where basic lead arsenate was increased to 6 pounds per 100 gallons of spray. On the other hand, considerable improvement occurred where acid lead arsenate was increased to 3 pounds per 100 gallons of spray.

The natural mortality of the plum curculio is normally high but varies from season to season due to different weather conditions that occur in one or more of its life stages. The survival also varies in different soils and under different systems of orchard management.

Where crop failures are infrequent, control measures for the plum curculio can not be taken lightly. Its reproductive powers are great under favorable climatic conditions and the mild spray schedules now in general use can not prevent an outbreak when weather conditions favor its full reproduction. It is the awareness of what can happen that has made entomologists reluctant to suggest the use of basic lead arsenate in the peach spray schedule in many sections of the country.

The choice between basic lead arsenate and acid lead arsenate is limited to those with frequent crop failures, to those with mild infestations and to those who use supplemental control measures.

Present experiments are directed towards seeking more effective materials than arsenicals and to seeking other control measures than spraying. A new material containing 50%

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WAR SURPLUSES

The Coliseum at Ashland, Ohio where one of the first experimental auctions of surplus war materials was held on September 8th.

THE general belief that the European phase of the present war will end at an early date has both increased public interest and hastened government tempo in dealing with surpluses of war materials. Jurisdiction over the materials is exercised by the Procurement Division of the U.S. Treasury, the War Food Administration and the Reconstruction Finance Corporation. Of these three, Treasury Procurement is by far the most important for the individual fruit grower. Most of the items that will interest him are handled here. The role of WFA is limited largely to the disposal of foodstuffs. RFC handles basic raw materials that may be left over when the huge war production slows up.

Under jurisdiction of RFC, however, is considerable material and equipment owned by Defense Plants, Inc. This material has never been under the jurisdiction of the War Department. Experimental auctions have been held to test that method of disposing of the surplus material. One of these was held September 8 at Ashland, Ohio. Here were sold hundreds of articles from pumps to wheelbarrows. Prices were good, but the crowds were so vast that some individuals had trouble making bids. Presumably, other auctions will be held. These will be announced in the districts they are to be held. Farmers should contact their AAA county agents if they would be informed of these. RFC is working very close with the Triple A.

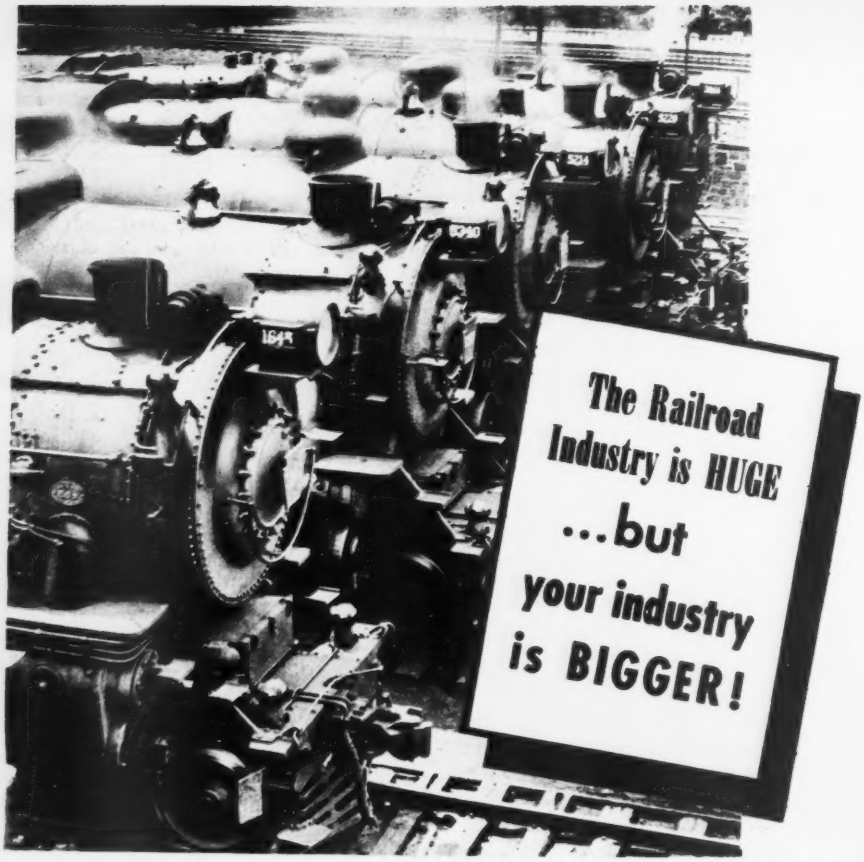
The Treasury Procurement disposal program, which will run eventually into billions of dollars, does not at the present time plan auctions. It will dispose of its material through recognized dealers and wholesalers. Cooperatives that are recognized by the AAA can buy like wholesale dealers, and county agents will be informed of material available.

Treasury officials give the following explanation of why they will not attempt to sell at retail. First they expect to sell "as is, where is." This makes it difficult for retail dealers to inspect material. Also it is the hope that regular dealers will condition automotive equipment before they re-sell it. The government hasn't warehouses or even open lots on which to store or display material. Dealers have this space.

An example of Treasury surpluses and methods of disposal is furnished by a letter sent to editors of farm papers September 14, telling of 2,319,645 pounds of galvanized staples for sale. Says the letter: "Interested hardware dealers and other purchasers, including exporters, should contact Hardware Division, Office of Surplus Property, Treasury-Procurement, 7th and D streets S.W. Washington 25, D.C."

Fruit growers should keep in touch with Treasury-Procurement headquarters in their respective district. A map showing the 11 districts with addresses and telephone numbers is printed below.

The Treasury's Procureemnt Divisions is divided by states into eleven regions. Addresses and telephone numbers are given on this map.



DOES it surprise you to know that farm income in 1943 was TWICE AS BIG as the total operating income of the railroads?

Yes, farming is BIG BUSINESS. And farm work, no less than any other industry, needs the best of *specialized equipment*. That's why Exide builds batteries designed to meet farm requirements . . . just as Exide builds special batteries for railroads, mines, ships, factories and other industries.

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LETTERS

(Continued from page 7)

Tariff

Dear Sir:

I was interested in your tariff editorial in *August Fruit Grower*.

The relationship between natural resources, tariffs and prosperity may be more easily understood by considering a suppositional case near at home. Let us assume that New York City constituted a sovereign independent nation, having a population comparable to any one of several small European nations like Sweden, Denmark, Holland and Belgium. Let us assume that the city limits of New York constituted the political boundary, and that the surrounding territory of Connecticut, Massachusetts, New Jersey and up-state New York were rival independent sovereign nations, each jealous of its own rights, commercial privileges and prosperity.

To make the situation fit world conditions, let us assume these sovereign states conceived the idea that their property would be enhanced by establishing tariff barriers against the "Republic of the City of New York." Let us suppose that Massachusetts sought to boost its publishing business by setting up high tariffs against New York books, magazines and other products. Then other "republics," thinking this a good idea, followed suit to improve their prosperity. Philadelphia, let us suppose, induced Pennsylvania to bar the products of New York clothing industry. Then other republics sought to protect their infant clothing industries, and therefore imitated Pennsylvania. Schenectady would perhaps want "protection" against New York City's manufacturing of electrical gadgets. Thus the race for protection would be on! To make it a clear case, let us suppose that all "foreign" nations sought protection of home industries by setting up prohibitive barriers against everything that came from New York City.

Jesse L. Brenneman

Now what would be the consequence of this international trade war against New York City? With all sales out of New York prohibited, in the end all purchases would be prohibited; for a society no more than an individual can long continue to buy if it is prohibited from selling. New York City is forced into an economy of self-sufficiency. But they have no natural resources except the air they breathe! Even their drinking water is imported from the Adriondacks. They could scarcely grow their own lettuce and radishes. It would be an empty gesture for Kansas, Nebraska and Iowa to offer to sell New York City wheat, beef and pork. Purchases of goods would be impossible without an export balance with which to pay for them.

What then would be the alternatives for the people of the city of New York? If as a morally righteous folk they did not want to be aggressors against their neighbors, they might try to emigrate, but if immigration quotas of their neighbors corresponded to the present laws of the United States, that solution of the problem would be a slow process. Ninety-five percent would die before the quotas would let them out.

Or, they might compromise their moral principles and steal what they could not buy. It might have some of the earmarks of legality. They could promise to pay,

well knowing they would be unable to fulfill the promise. They might offer phony money or securities until such frauds could no longer be put over on the foreigners. Then, as starvation threatened, they might be able to inspire pity from the outside world, and thus win enough charity to keep a miserable body and a righteous soul together a little longer. And then at last they would have to lie down peaceably and die!

Or perhaps they would obey the first law of human nature—the law of self-preservation—and become aggressors in their own behalf. They might organize an Army to push back the political boundaries in order to push back the tariff boundaries, until a balanced economy had been obtained. But that solution would mean war!

We are inclined to divide the world into two classes, the "good" and the "bad" nations. The bad nations are the aggressors. The non-aggressors are good for one of three reasons: (1) They already have the lion's share of the world resources. Examples are the United States, Britain, Russia, and France. (2) They are too little to fight with any hope of success, as Switzerland, Denmark and Norway; or they are economically and industrially impotent to wage an engineer's war, as India and China. (3) Or they are in a primitive state of civilization and have not learned to hunger for the gadgets of civilization that come from beyond their borders. We might cite Venezuela, Columbia and Java for examples. We should not forget that Switzerland was just as much angered over our 1930 tariff barrier against their watch industry as were Japan and Germany against other items in the tariff law. But they were too little to fight and so made a virtue of necessity.

The doctrine that tariff produces prosperity, leads to some queer paradoxes in logic. If tariff produces prosperity when it coincides with a political boundary, why wouldn't tariff barriers within a nation produce more prosperity? Why not set up a barrier along the Mississippi River, the Ohio, and the Hudson—the more barriers, the more prosperity? France herself has illustrated this political hypocrisy when in 1928 she, as a member of the League of Nations, emphatically opposed the economic union of Germany and Austria, fearful that removal of tariff barriers might make Germany too strong—that is, might produce too much prosperity that might be turned into military channels. (Of course France's legal language pleaded that the union was a violation of the treaty, but the economic argument was doubtless the reason for having such a clause put there.) But at the same time, France would not remove her own tariff barriers against the world, and thus take a step toward economic union with the whole world because economic union would presumably endanger her own prosperity.

I asked a Professor of Economics if he knew of any economist that attempted to defend trade barriers as an aid to prosperity. He said: "I can't say that I know of one." Thus this political doctrine is not only founded upon selfishness, but upon misguided selfishness. Still more tragic is its role in disrupting harmonious relations between nations. It inspires fight and retaliation and not cooperation and friendship.

Ankeny, Iowa — Jesse L. Brenneman

Thanks for a clear, concise statement on one phase of the tariff problem.—Ed.

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Many improvements and refinements have been made in John Deere tractors since 1924. Advances have been made in economy and ease of operation. Better materials and improved manufacturing methods have been adopted. New models of various types and sizes have been designed so that today there is a John Deere tractor to fit most every farming need. Modern in every respect . . . streamlined . . . starter and lights . . . hydraulic power lift . . . multiple-speed transmission . . . yet the basic fundamental principle—two-cylinder engine design—remains unchanged. Unchanged because this engine design gives the farmer *all* the features he wants and should have in a modern, up-to-date tractor. See your John Deere dealer—now.

JOHN DEERE, *Moline, Illinois*

BUY MORE BONDS ★ GET IN THE SCRAP

HURRICANE DAMAGE SEVERE

The East Coast Hurricane which battered 900 miles through 11 Atlantic States on September 14th caused an estimated damage of $30,000,000. Damage to New England orchards was severe as witnessed by the following telegrams in answer to inquiries made by the AMERICAN FRUIT GROWER.

J. K. SHAW
MASSACHUSETTS

MCINTOSH WERE 25 TO 35 PERCENT PICKED. OVER HALF OF REMAINDER BLOWN OFF. LATER VARIETIES 25 PERCENT. WORSE IN EASTERN THAN WESTERN PART OF STATE. SOME TREE DAMAGE NOT MUCH. GOOD HURRICANE MCINTOSH SELLING ONE DOLLAR TO TWO DOLLARS. GOVERNMENT PURCHASE DOLLAR FIFTY.

E. P. CHRISTOPHER
RHODE ISLAND

HURRICANE CROP DAMAGE HEAVY. MCINTOSH ONE THIRD HARVESTED. 75 PER CENT OF THE REST ON GROUND. ABOUT ONE QUARTER OF LATE APPLES DOWN. GOOD DROPS. STORES PROMPTLY MARKETING ORDERLY. OCCASIONAL TREE DOWN. MANY LIMBS AND SPURS BROKEN. MUCH TREE STRAIGHTENING AND TAMPING SOIL ABOUT BUTT NEEDED. LOSS VARIABLE BETWEEN ORCHARDS. GROWERS SEEK CEILING RELIEF.

H. A. ROLLINS
CONNECTICUT

HURRICANE SEPTEMBER 14TH BLEW OFF 600,000 BUSHELS APPLES IN CONNECTICUT. 300,000 MACKINTOSH, 300,000 LATER VARIETIES. GENERAL DAMAGE THROUGHOUT STATE. RELATIVELY LITTLE APPLE TREE LOSS. ONE HALF PEACH TREES IN STATE BLOWN OVER. WAR FOOD ADMINISTRATION COOPERATING IN FRUIT SALVAGE THROUGH CONNECTICUT POMOLOGICAL SOCIETY VENDOR.

A. F. YEAGER
NEW HAMPSHIRE

THE HURRICANE BLEW OFF FIFTY PERCENT OF NEW HAMPSHIRE APPLES RANGING FROM TEN PERCENT TO SEVENTY-FIVE PERCENT IN VARIOUS ORCHARDS. THESE WERE MOSTLY MCINTOSH WHICH WERE READY TO PICK. TREE DAMAGE WAS GENERALLY NOT SERIOUS. OCCASIONAL WEAK ONES WERE BROKEN AND A FEW TIPPED OVER.

Building the Future of America

The most productive seedbed you will ever prepare is the foundation of your boy's future . . . his outlook on life. From it will grow the future of agriculture . . . the future of America.

The hours you spend with your boy are precious hours, indeed. And it may very well be timely to ask yourself whether or not you are using enough of these hours and using them in the right way.

Unfortunately, the answer to this question today is, too often, no. The excuse most commonly given is, "too busy".

America became great through the combined efforts of people that weren't "too busy"—men who found time to relax in that bulwark of democracy, the old rocking chair.

They helped their sons develop a straight-thinking viewpoint, free from the confusion now so common. It was the products of this early rocking who gave to America its strength among nations.

If being "too busy" is robbing you and your son of this opportunity, he may get the impression that farming is not the kind of a life he wants to lead.

On the other hand, if you are using modern equipment—the Ford Tractor with Ferguson System and Ferguson Implements—you will get your work done faster and easier. You can show your boy that the farm of tomorrow holds forth opportunities for profit and a pleasing way of life that a job in a city can never give him.

You will have the time and be in the frame of mind to raise the most valuable crop a good farm can grow—a good American.

HARRY FERGUSON, INC. · Dearborn, Mich.

MODERN MECHANIZATION IS REVOLUTIONIZING AGRICULTURE

The Ford Tractor with Ferguson System and Ferguson Implements are bringing modern industrial efficiency to agriculture . . . making farming more profitable, faster and easier.

Powerful, light and compact, this modern tractor actually changes its weight, automatically, as traction requirements change.

Changing implements is as quick and easy as putting new sockets on a wrench.

Finger tip control of implements makes a full-fledged operator out of a child or a very old person—no physical strength is necessary.

Ask your Ferguson Dealer about all the other exclusive features of this revolutionary farming machine.

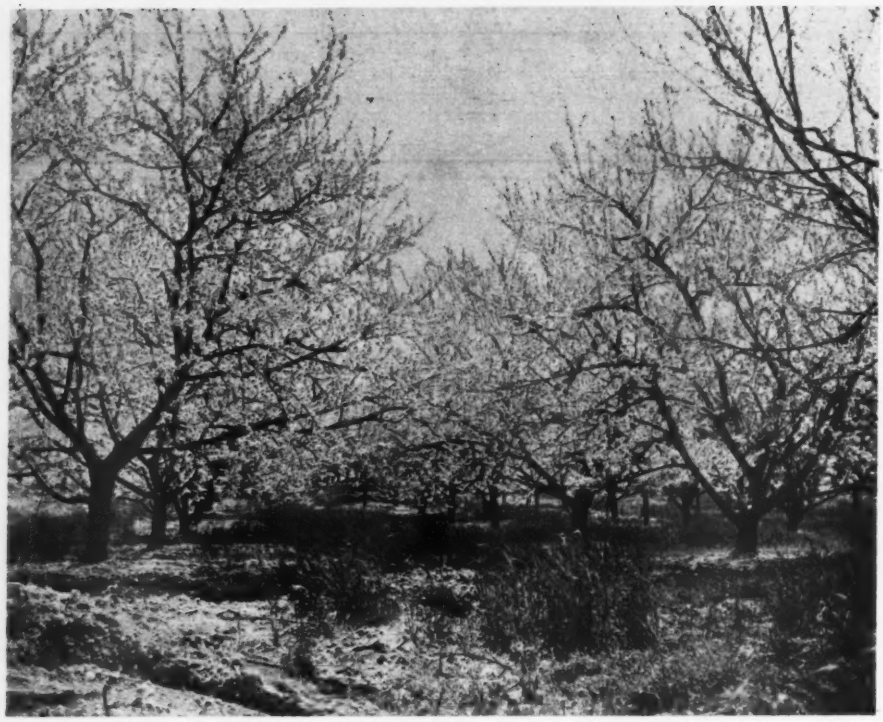
Ford Tractor
FERGUSON SYSTEM

The only Tractor that Automatically Changes its Weight, to Suit the Job.

PEACH VARIETY PERFORMANCE IN OHIO

By WESLEY P. JUDKINS

Ohio Experiment Station



Close-up of 2-year-old peach seedlings, showing blossoms for first crop. Photo courtesy U.S.D.A.

NOW that the peach crop has been harvested, it may be well to re-evaluate the different varieties while their performance during this recently past season is still fresh in our minds. Any fruit grower who plans to plant trees next spring should give careful consideration to the selections of varieties. Orders for young trees should be placed early to avoid disappointment in case the supplies of nursery trees continue to be somewhat limited as during recent years.

The descriptive material and evaluations of new and old peach varieties presented in this article are compiled primarily from observations made in Ohio orchards and the variety collection at the Ohio Agricultural Experiment Station. Varieties are listed in order of ripening, with the average ripening date at Wooster, Ohio indicated in each case. Approximate ripening dates for other localities may be determined by comparing the ripening dates of varieties now grown in the locality in question with those listed in this article. The difference thus secured may be used to estimate the maturity period of new or untried varieties.

The numerical values in the tables indicate the desirability of a variety as far as hardiness, fruit size, quality, firmness of flesh and freeness of stone are concerned. The figure "1" represents maximum or top value, figure "3" is average and "5" is very poor. For example in the case of hardiness 1 indicates very hardy, 2 means hardy, 3 represents medium hardiness similar to Elberta, 4 means tender, and 5 means very tender. In the case of size, quality, and firmness, 1 indicates very large, very high quality or very firm, 2 means large, high quality, or firm, 3 denotes average or medium, 4 means small, fair quality, or soft, and 5 indicates very small, poor quality, or very soft. In describing freeness of stone, 1 means freestone, 2 denotes a tendency to cling in some seasons,

(Continued on page 22)

TABLE I.—Evaluation of peach varieties for Ohio

(Additional experience in different parts of the state may change the rating of the varieties here listed.)

Variety	Approximate ripening date	Color of Flesh	Hardiness of buds	Fruit size	Fruit quality	Fruit firmness	Stone freeness	Remarks
Most important commercial varieties								
Cumberland	Aug. 14	W	1	3	3	3	2	Standard in its season
Golden Jubilee	Aug. 15	Y	2	3	3	3	1	Too soft for shipping.
Halehaven	Aug. 27	Y	2	2	3	3	1	Fast becoming standard variety.
Belle of Georgia	Sept. 6	W	1	3	3	2	1	Preferred to Champion.
Elberta	Sept. 9	Y	3	2	3	2	1	Buds rather tender.
Varieties for limited commercial planting.								
Erly-Red-Fre	Aug. 7	W	2	2	3	3	2	Attractive, promising.
Oriole	Aug. 11	Y	1	3	2	3	1	Best of its season.
Raritan Rose	Aug. 13	W	2	3	3	2	2	Firmer than Cumberland.
Pioneer	Aug. 14	W	1	2	3	3	1	May be soft.
Radiance	Aug. 17	W	2	2	2	3	1	Good to follow Cumberland.
Goldeneast	Aug. 23	Y	3	2	3	2	1	Good if hardier.
Vedette	Aug. 23	Y	2	3	2	3	2	Good canner.
Sunhigh	Aug. 25	Y	2	2	2	2	2	Promising.
Redrose	Aug. 28	W	2	3	2	2	1	Very promising.
Midway	Aug. 30	Y	2	3	2	3	1	Promising to follow Halehaven.
Champion	Sept. 3	W	1	2	2	3	2	Belle of Georgia preferred.
Kalhaven	Sept. 6	Y	3	3	3	2	1	Needs heavy thinning.
White Hale	Sept. 10	W	3	1	3	2	1	Best of its season.
Shippers Late Red	Sept. 11	Y	3	2	3	2	2	Some strains are poor.
Afterglow	Sept. 12	Y	2	2	3	2	1	Promising to follow Elberta.
Varieties to satisfy special local demands								
Mikado	Aug. 1	Y	1	3	3	4	3	Best of its season.
Marigold	Aug. 4	Y	1	3	3	4	3	Best of its season.
Fisher	Aug. 6	Y	3	3	2	3	2	Promising in some areas.
Redhaven	Aug. 9	Y	2	3	3	2	1	Firmer than Oriole.
Delicious	Aug. 17	W	2	2	3	3	1	Radiance preferred.
Early Halehaven	Aug. 20	Y	2	3	3	3	1	New.
Newday	Aug. 25	Y	3	2	3	2	2	Halehaven or Sunhigh preferred.
South Haven	Aug. 25	Y	2	3	3	3	2	Halehaven preferred.
Sun-Glo	Aug. 25	Y	2	3	3	3	2	Bud selected South Haven.
Colora	Aug. 25	Y	2	2	3	3	2	Halehaven or Sunhigh preferred.
Zarn	Aug. 29	Y	3	2	3	2	1	Quality fair; buds tender.
Valiant	Aug. 29	Y	2	3	3	3	2	Halehaven or Midway preferred.
Veteran	Sept. 1	Y	2	3	2	3	2	Midway probably better.
Redelberta	Sept. 2	Y	3	3	3	3	1	Of questionable value.
Eclipse	Sept. 2	Y	1	3	3	3	1	Small; needs heavy thinning.

VICTORY IS OUR BUSINESS

IN INDUSTRY AS ON THE FARM . . .

know-how has accounted for an astounding record of production for war. The fact is that in output of armament, American industry has produced a volume greater than that of all the other United Nations combined—according to latest figures, about half again as much.

There's Nothing Like "Know-How"

Milking, plowing, cultivating . . . many a minor chore and many an important farming operation that is "second nature" to the farmer . . . baffles the city man. You must have the *know-how*.

And you need the *know-how* more than ever when it comes to producing food in enormous quantities . . . good food from crops and herds and flocks . . . food that is doing so much to win the war . . . food by the train- and shipload . . . food to feed our fighters and their allies . . . food for the hungry millions our victorious armies are liberating.

That's why the American farmer has done such an outstanding job in producing "fighting food." He has the *know-how*.

In our job of producing *arms* for war, we manufacturers also have found that *know-how* is what counts. If industry hadn't learned in times of peace how to turn out better and better things in greater and greater quantity to help build higher and higher standards of living in this America of ours . . . it never could have done the job it is doing in this war. There's nothing like *know-how*.

Farmers and manufacturers know this. From their own experience, they realize that it takes a farmer to run a farm, a manufacturer to run a factory, an artist to paint a picture, a doctor to treat sickness, a lawyer to practice law . . . *the man with the know-how* for each and every job.

That's why farmers and manufacturers alike stand so strongly for the good old American principle of *every man his own master* . . . free to do his job his own way . . . free to try his own ideas and develop his own skills . . . free to stake his chances of success on his own individual initiative, energy and *know-how*.

FORD FIGHTS for freedom

Sunday Afternoon—NBC Network
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GMC TRUCK • FRIGIDAIRE • DELCO APPLIANCE

PEACH VARIETIES IN OHIO

(Continued from page 20)

3 indicates semi-clingstone, and 5 complete clingstone. The letter "Y" under flesh color denotes yellow flesh, whereas "W" indicates white flesh.

The ratings are compiled chiefly from the point of view of the commercial orchard. Selections for the home orchard would be similar but personal preference may have more influence in the final choice.

Varieties which ripen after Elberta are susceptible to serious injury by larvae of the Oriental Fruit Moth. For this reason late-maturing varieties are not recommended for commercial planting unless parasites can be released to keep this pest under control.

TABLE I.—Evaluation of peach varieties for Ohio—Continued

(Additional experience in different parts of the state may change the rating of the varieties here listed.)

Variety	Approximate ripening date	Color of flesh	Hardiness of buds	Fruit size	Fruit quality	Fruit firmness	Stone freeness	Remarks
Varieties to satisfy special local demands—continued								
Summercrest	Sept. 5	Y	2	2	2	3	1	Promising new variety.
Early Elberta	Sept. 6	Y	3	3	3	3	1	Kalhaven probably better.
Sungold	Sept. 7	Y	2	2	3	3	1	Promising.
J. H. Hale	Sept. 10	Y	3	1	1	3	1	Small tree; low yields.
Gage Elberta	Sept. 11	Y	3	2	3	2	1	Afteerglow probably better.
Picketts Favorite	Sept. 11	Y	3	3	3	2	1	Afterglow probably better.
Kette	Sept. 13	Y	3	2	3	2	1	Good canner.
Hope Farm	Sept. 14	W	2	3	3	3	1	White Hale preferred.
Hardee	Sept. 14	Y	2	3	3	2	1	Tree only fair in vigor.
Brackett	Sept. 14	Y	3	3	3	2	1	Afterglow preferred.
Lizzie	Sept. 19	Y	2	3	3	2	1	Best of its season.
Iron Mountain	Sept. 20	W	2	3	3	3	1	Best of its season; unattractive.
Salberta	Sept. 25	Y	3	2	3	3	1	Best of its season.
Varieties of little commercial value.								
Buttercup	Aug. 2	Y	2	4	3	4	3	Mikado or Marigold preferred.
Arp Beauty	Aug. 4	Y	2	3	3	4	2	Mikado or Marigold preferred.
Greensboro	Aug. 6	W	1	3	4	4	3	Erly-Red-Fre preferred.
Sunbeam	Aug. 14	Y		3	4	3	3	Good freezer; does not discolor.
Carman	Aug. 17	W	1	3	4	5	3	Soft; fair quality.
Triogem	Aug. 17	Y	4	2	2	2	1	Good but buds tender.
Rochester	Aug. 19	Y	1	3	3	3	2	Susceptible to arsenical injury.
Fireglow	Aug. 23	Y	4	2	2	2	1	Good but buds tender.
Golden Globe	Aug. 25	Y	4	2	3	3	1	Buds tender.
July Elberta	Aug. 26	Y	3	3	3	2	1	Halehaven preferred.
Pacemaker	Aug. 30	Y	3	1	2	2	1	Tree lacks vigor.
Polly	Sept. 6	W	3	2	3	3	1	Good canner.
Primrose	Sept. 6	Y	3	3	3	3	1	Kalhaven or Summercrest preferred.
Halberta Giant	Sept. 10	Y	3	1	2	3	1	Resembles J. H. Hale.
Candoka	Sept. 10	Y	5	1	3	2	1	Buds very tender.
Welcome	Sept. 11	Y	3	2	3	3	1	Afterglow probably better.
Fertile Hale	Sept. 11	Y	3	2	4	3	1	Poor quality; soft.
Halberta	Sept. 12	Y	3	3	2	3	1	Afterglow hardier.
Rio-Oso-Gem	Sept. 15	Y	3	2	3	2	1	Tree small; buds tender.
Wilma	Sept. 15	Y	4	2	3	2	1	Buds tender.
Williams Cling	Sept. 23	Y	3	3	3	3	5	Good for pickling.
Lemon Free	Sept. 25	Y	2	3	3	3	1	Fair quality; good canner.
Salway	Oct. 17	Y	3	3	4	3	1	Fair quality; tender buds.
Krummel October	Oct. 24	Y	3	3	4	3	1	Too late, may not ripen.

The uniformity of these harvested peaches shows a good job of thinning.

BASIC LEAD VERSUS ACID LEAD

(Continued from page 14)

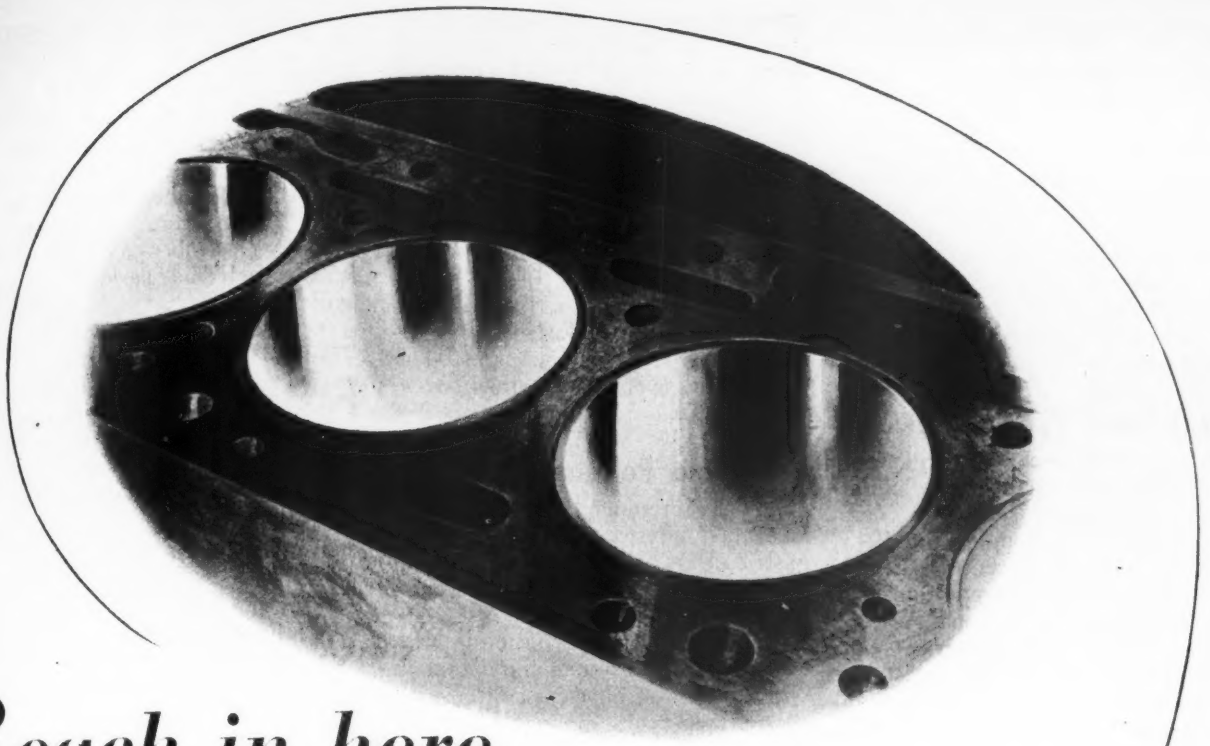
metallic zinc has been introduced by one insecticide manufacturer for trial in eastern states. It shows promise of overcoming some of the objections to the use of effective quantities of acid lead arsenate in peach sprays.—Harold M. Steiner, Arendtsville Fruit Research Laboratory.

Authorized for publication on September 6, 1944, as paper No. 1245 in the Journal Series of the Pennsylvania Agricultural Experiment Station.

Georgia

Acid lead arsenate, although reasonably effective against the plum curculio, is objectionable on peach because of its injurious effect on the foliage, buds, budwood and fruit, especially under certain weather conditions. The severe foliage injury and heavy defoliation that frequently result from the regular schedule of lead arsenate sprays on peach trees in the South interferes with the proper nourishment of the fruit buds for the following season's peach crop.

A satisfactory substitute for acid lead arsenate for plum curculio control on peach that will be effective and safe has been sought in investigations at the Fort Valley, Georgia, laboratory of the U. S. Bureau of Entomology and Plant Quarantine for a number of years. Basic lead arsenate has been included in these investigations. Although it proved to be safer than acid lead arsenate for use on peach trees, feeding tests showed that it was a slow-killing poison for the plum curculio and spraying experiments in commercial peach orchards showed that it was less effective against that insect. Four applications of basic lead arsenate did not control the plum curculio as well as three applications of the standard acid lead arsenate. Under conditions in the South where the plum curculio is two-brooded, it would not be wise to substitute basic lead arsenate for acid lead arsenate in the spray schedule for plum curculio control on peach.—Oliver I. Snapp, U. S. Dept. of Agriculture Bureau of Entomology and Plant Quarantine.



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The ability to resist corrosion is inherent in chromium and is well known. The ability to resist cylinder wear, also, is inherent in this new form of chromium . . . PORUS-KROME . . . and is being demonstrated daily in thousands upon thousands of engines in use by the Army and Navy, and in essential civilian operations.

PORUS-KROME, produced by the Van der Horst process, is different from ordinary chrome because it has tiny open pores and channels in the surface. These pores and channels serve as reservoirs to hold lubricating oil . . . and then feed it back to the cylinder walls as needed. This excellent lubrication reduces wear, scoring and scuffing to a minimum.

Both corrosion and wear . . . those two enemies of long engine life . . . can be defeated at last. You can multiply the cylinder life of your engines 4 to 20 times . . . specify PORUS-KROME in engines you buy.

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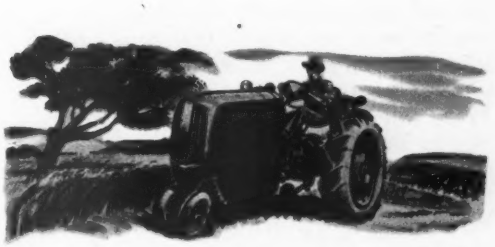

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NATIONWIDE NEWS

Tire Shortage Continues

WITH many trucks and buses down all over the country, the severe shortage of heavy-duty truck and bus tires for replacement purposes will continue through the fourth quarter of 1944 and a spread of the tire shortage to the smaller size truck tires is in prospect, the Office or Defense Transportation reported recently. The deficit in smaller size tires will affect principally farm and delivery trucks.

Frozen Food Production Up

THE quick-frozen food industry will pack more than half a billion pounds this year, setting a new world's record and topping the 1943 output by about 15 percent, according to Edwin T. Gibson, director and former president of the National Association of Frozen Foods Packers. About 85 percent of this record pack will become available for U. S. civilian consumption. Last year the civilian allocation was only 60 percent.

Fruit by Telegraph

THE Fruit Telegraphic Delivery Service, Inc., with its membership now over 1,500, is helping to bring more business to the fruit industry. Every day people are learning that they can telegraph a basket of fruit to friends on special occasions. Any fruit dealer interested in joining this service can write to headquarters at 2337 Boardwalk, Atlantic City, New Jersey.

Superphosphate Outlook

PRODUCTION of superphosphate fertilizers will be greatly affected by industrial shortages of sulfuric acid caused by increased demands of the Army for ordnance requirements and of the Petroleum Administration for War. The War Food Administration has been notified by WPB that its requirements for 10,000,000 tons of superphosphate fertilizers for the fertilizer year July 1, 1944, to June 30, 1945, will not be fully met. According to the current rate of fertilizer production, approximately 8,000,000 tons of superphosphate fertilizers will be available to American farmers for this period. This compares with 6,800,000 tons available in the 1943-44 fertilizer year.

Citrus Tree Census

A CITRUS tree census taken in the Lower Rio Grande Valley by the Harlingen Station of the U. S. Bureau of Entomology and Plant Quarantine to determine the amount of material required in the work of protecting the trees from the Mexican fruit fly, shows a gain of 1,090,479 trees planted since the summer of 1941. The figures are: for grapefruit, 336,846 trees; oranges, 735,645 trees; tangerines, 4,684 trees; lemons, 10,769 trees; limes, 635 trees; other citrus, 1,891 trees.

Low-Acid Peaches

ONCE forbidden all acid fruits by their physicians, sufferers from gastric ulcers and other stomach troubles can now at least enjoy peaches. Plant breeders at the New Jersey Agricultural Experiment Station in New Brunswick, working in cooperation with a Trenton physician, discovered that raw peaches did not leave any after-effects on ulcer patients if their acid content was low.

After a 15-year breeding program, the Station has produced 23 special low-acid peach varieties that are combined with other desirable qualities and ripen in different seasons.

Apple Products Meeting

APPROXIMATELY 34.3 million bushels of apples will be required for processing, while about 91.3 million bushels will be available for fresh consumption, it was estimated at the Apple Products Industry Advisory Committee meeting with the War Food Administration in Washington recently.

OPA representatives indicated that ration points will be adjusted on apple sauce and apple butter so that the 1944 pack will move into consumer channels at a rate that will permit this year's supply to be consumed by the time the 1945 pack is available.

This is only one of the 40,000 barns razed by flames in 1943. Farmers are urged to concentrate on eliminating the principal fire hazards on their farms during Fire Prevention Week, which is to be observed during the week of Oct. 8-14, by proclamation of the President.

Women's Land Army

THE official record for 1943 shows that 250,000 women workers were placed on farms by the local placement offices of the Extension Service Farm Labor Program between April 29 and December 31. There were 5,500 reported as placed in year-round work.

Fruit Exports

FIRST in importance among foods exported from the United States is fruit with an average annual value of $87,000,000 in the ten years prior to the war. Only cotton and tobacco outrank fruit in value among our agricultural exports.

New Locker Plants

ONE or more frozen food locker plants can now be found in every state in the country. The United States now has 5,282 frozen-food locker plants. In Iowa, which has the most, there are 580 plants. Minnesota is second with 470, and Washington State is third with 404.

Last year's increase was 723 new plants, not counting additions to old ones or plants still under construction. These building operations were made possible by allocations of metal for the purpose.

Extension Service

THE United States Agricultural Extension Service has reported that a total of 8,366,773 rural families throughout the country were influenced by some phase of agricultural extension work last year. This was approximately 31 percent greater than the 1942 figures show.

Cold Storage Order

WITH total occupancy of the nation's cold storage warehouses at the highest level in history, the WFA has taken steps to insure availability of sufficient freezer space to handle products most essential to the war. The total quantity of frozen fruits and vegetables, and packaged frozen fish that may be stored in any warehouse is limited by this action to the quantity that was stored on October 1, 1943. Storage of any product is prohibited in lots smaller than 300 pounds.

This ceiling on stocks of frozen fruits and vegetables was made necessary by the tremendous growth of the frozen food industry which has led to use of a disproportionate share of freezer space for these commodities. The new order allots them about one-fourth of the total freezer capacity of the country.

APS

NEW PEARS IN THE MAKING

BARTLETT dominates the pear industry. Two-thirds of the thirty million bushel pear crop of this country is produced in the far western states of California, Washington and Oregon. The dominating position of Bartlett is very apparent in the western states. The U.S.D.A. forecast for the 1944 pear crop in that region is 19,626,000 bushels. The Bartlet crop stands at 14,364,000 bushels or 75 percent of the total produced in the west. In the east, Michigan and New York each produce about 1.1 million bushels per year.

Bartlett is a great variety, but it is closely confined to commercial production in relatively small areas. The tree is winter tender in the colder sections of the United States, and worst of all is very susceptible to pear blight.

Experiment station workers have been working on the pear blight problem for twenty-five to fifty years. New varieties of standard market quality, which grow on trees resistant to blight, are the objectives of extensive pear breeding projects, now under way in Oregon, New York, Tennessee, Michigan, South Dakota, Minnesota, Iowa and other states, and by the U.S.D.A. Results are not yet too promising, but progress is being made in the way of new variety introductions. The New York station has introduced Phelps and Gorham and with considerable success. Hardy, large-fruited pears introduced by the Minnesota station are Parker and Bantam. The Patten from the Iowa station is the hardiest of the large fruited varieties. These mid-west varieties are popular for home orchard planting in that area. The Waite pear introduced by the U.S.D.A. is markedly blight resistant, and is a clear example of what is ahead in the nature of blight resistance.

The pear breeding work of the Tennessee station was reviewed by pear breeders on October 3 and 4. This work under the direction of Dr. Brooks D. Drain has progressed nicely, and to date, certain selected seedlings have shown marked resistance to fire blight. These were produced by a series of inter-species crosses.

H. L. Lantz
Secretary

"Remember how we used to Pop Corn on Saturday Nights?"

Remember how we used to watch the sun set over the meadow?...Bet I can still beat Jack at checkers...How I'd like to sink my teeth in one of Mom's pumpkin pies . . .

Sure, he's got bigger, more important things to worry about so far away from home. But when there's time he writes a letter . . . a letter full of the little things so close to his heart.

For these little things, these small familiar pleasures add up to something pretty big. To him—as to all of us—they add up to Home.

It happens that to many these small pleasures may include a glass of beer occasionally—as a beverage of moderation after a hard day's work . . . enjoyed with friends or with a home-cooked meal.

A glass of beer—not of crucial importance, surely . . . yet it is little things like this that help mean home to all of us, that do so much to build morale—ours and his.

BREWING INDUSTRY FOUNDATION

Morale is a lot of little things

STATE NEWS

INDIANA—Monroe McCown, Secretary of the Indiana Horticultural Society, left Purdue September 1st, on leave of absence. He will be located in the U. S. Department of Agriculture with the Fruit and Vegetable Division, War Food Administration, at Washington, D. C. Therefore, Indiana fruit growers have not entirely lost the benefits of his many years of experience and personal interest in their problems. We will all be looking for "Mac" to come back to the Hoosier state as soon as possible.

The severe drought has recently been broken by general rains over the entire state. They came too late to be of much help to the peach crop, which was generally a quarter inch under normal size which meant at least a 25% reduction in the original estimates on volume of the crop.

The recent rains will help the late varieties of apples. The volume of the crop will be reduced 25% due to the severe shortage of moisture which also provided ideal conditions for codling moth development. Severe cracking is reported on Stayman. Most late varieties of plums also cracked severely following the rains. This was even true of non-susceptible varieties such as French and Shropshire Damson.—C. L. Burkholder, *Asst. Chief in Horticulture, Purdue University.*

MINNESOTA—The annual meeting of the Minnesota Fruit Growers Association will be held in conjunction with the Minnesota State Horticultural Society at the Curtis Hotel, Minneapolis, on October 10 and 11. The Minnesota Beekeepers Association will meet at the same time. The main fruit program will be on October 11. Out-of-state speakers will be Frank C. Pellet, field editor of the American Bee Journal, who will discuss pollination problems in the orchard, and Conrad L. Kuehner, extension horticulturist from Wisconsin who will tell how to operate spray rings. Election of directors of the Minnesota Fruit Growers Association is scheduled for 11:45 a.m., October 11. Terms expiring are Leon F. Gates, Geo. N. Pabst, Oscar Sorby, Andrew Wolford, and J. D. Winter.

At a meeting of the executive board of the Minnesota State Horticultural Society on September 9, Eldred M. Hunt of St. Paul was elected secretary-treasury, effective October 15. Mr. Hunt is at present extension horticulturist at the Minnesota Agricultural Experiment Station. His election as secretary of the Horticultural Society will be welcomed by fruit growers throughout the state where he has wide acquaintance among home and commercial growers.—J. D. Winter, *Sec'y, Mound.*

KENTUCKY—Following a month with plenty of rains, Kentucky again has come back to normal in so far as bluegrass and lespedeza are concerned, but it was too late to take care of the needs of the apple and peach growers. Our peach crop was at least one-fourth inch under size, due to the dry weather, and the dry weather combined with a perfect season for codling moth development, literally ruined our apple crop. A large percentage of the apple crop in many orchards came to the ground in late July and early August, and the remaining apples shriveled on the tree. Our Stayman crop, I believe, is cracked worse than in any year I have ever seen it. I feel sure that the government estimates of the commercial crop in Kentucky is far over-rated. Both apple and peach trees, however, will go into fall and winter in good condition from the splendid rains of the past month.—W. W. Magill, *Sec'y-Treas., Lexington.*

SOUTH DAKOTA—Our fruit crop has been very satisfactory this year. Mr. A. R. Schamber, Rapid City, had some very fine apples and hybrid plums at our recent annual convention and said his crop was the best in several years. Thomas Miller of Hot Springs, reports a very good crop in quality. In the eastern part of the state, the crop is also satisfactory. C. M. Satnan, Sioux Falls, has a light crop on Wealthies, the off year for this variety, but a full crop on other varieties.

The following officers were elected recently: President, H. N. Dybvig, Colton; Vice President, Dr. L. C. Snyder, Brookings; Sec. W. A. Simmons, Sioux Falls; Treasurer, F. X. Wallner, Sioux Falls; Librarian, Mrs. Morris Harter, Highmore. Directors: 5 years, J. B. Taylor, Ipswich; 4 years E. A. Gates, Rapid City; 3 years, Geo. W. Gurney, Yankton; 2 years, Dr. S. A. McCrory, Brookings; one year, A. R. Schamber, Rapid City.—W. A. Simmons, *Sec'y, Sioux Falls.*

Benjamin R. Gilbert of San Jose, California with his patented invention—a prune picker.

CALIFORNIA—Benjamin R. Gilbert of San Jose has invented a prune picker, maybe we should say, a "prune-picker-upper" that makes it possible to do this very thing. It allows you to pick up as many as ten prunes at a time, shooting them into the container in the wink of an eye.

This implement is made in two sizes to accommodate the height of the people picking. It is either three feet six inches or three feet ten inches long and weighs four and one half pounds. It is a rod with spring running through a shaft at the end of which are two galvanized iron disks with 115 pins made of piano wire sticking out to pick up the fruit.

In making it there are 600 operations required. The regular staff working in a small shed, consists of Mr. and Mrs. Gilbert and a man assistant. The neighbors help him two or three hours a day when they can, enabling him to have several hundred of them ready by the time the prune season gets underway. He has patented the picker and Safer Sagmister, his assistant, has invented and patented the pin bender used in one of the operations. Mr. Gilbert can show that the labor of five men a day will be saved by his prune picker.—Rose Kennedy, *Palo Alto.*

CONNECTICUT—Fruit growers in southwestern Connecticut have experienced the most severe drought that even the oldest inhabitants can remember. There has been practically no rain during the 12 weeks preceding September 15. It is the second successive year of moisture deficiency. Peach trees and apple

(Continued on page 28)

OKLAHOMA—An early morning crowd at the Red Branch Cherry Orchard Seeding Plant at Noble. Some observers are watching the washing process, others the sorting and seeding, while the rest line up with their containers to get the product ready for either fruit jars in home canning or for frozen food lockers.—Esther M. LaValley, Oklahoma City.

HOW RED IS MY VALLEY

(Continued from page 11)

used as a storage place for boxes and lumber to build them. Power machines can cut and join boxes at a rapid speed. Although he is one of the strongest competitors of Washington and Oregon apple growers, lumber from those states is used principally in making the boxes that Byrd uses for shipping his apples.

A feature of the packing plant on the second floor is apparatus for waxing all apples by what is known as the Brytene process. This wax—a vegetable product that comes from Africa—is sprayed on after the apples have been washed and graded. Total cost is approximately a cent per box. Byrd thinks this a very small investment for the good it does in preserving the fruit. A large part of Byrd apples are wrapped before shipping. This wrapping is done by professional wrappers who come in crews largely from Florida orange groves. These workmen are paid 10 cents a box and can wrap about 100 boxes a day. Pickers are also paid 10 cents a bushel. The best of these pick between 100 and 150 bushels a day, with perhaps 75 bushels as the general average. Minimum wage for unskilled workers in the plant is 45 cents per hour for men and 40 cents for women. A total of 400 men and women are employed in good years. Migrant workers are housed in a special camp where good meals are served at a very low price. Generally, Byrd tries to pay the prevailing wage in the area. He has never had any labor trouble.

Cultural methods in Byrd orchards are typical of the area. In his young orchards, alfalfa is sown between the rows of trees and is mowed two or three times a year and left to enrich the soil. He gets around 3,000 tons of manure—largely straw bedding—from racing stables at historic Charles Town—where John Brown was hanged—a few miles away. This costs him $1.50 a ton and he has to cart it regularly from the stable.

His orchards are not cultivated and he uses little mulching. After six or seven years, alfalfa—which grows well in the limestone soil of the Valley—gives away to natural bluegrass which makes a permanent cover crop. This is mowed once or twice a year to kill weeds and bushes as well as to provide more humus. No stock are grazed in the orchards. Valley land is gently rolling, with limestone rock coming to the surface here and there on much of it. There is little soil erosion.

The high natural mineral content of the limestone soil led Byrd for many years to use mainly nitrogenous fertilizers, but of late years he has been using balanced fertilizers and finds them more satisfactory. His present formulae were worked out by Dr. F. N. Fagan of the Pennsylvania Agricultural Experiment Station. A typical formula is 10-6-4, which means that respective proportion of nitrogen, phosphate and potash. Present net cost is $36.60 a ton. Up to 15 pounds is applied to each tree, depending upon size and age.

A great deal of spraying is necessary, especially to combat the codling moth. Few sections of the country are worse afflicted by this pest than the Shenandoah region. Often spray poisons—he uses lead arsenate with lime and in bad cases, nicotine sulphate—sufficient to kill the first worm that attempts to bore into an apple are ineffective against the second which enters the apple through the hole started by the first. Like other growers, Byrd is watching with interest the experiments being conducted with DDT, hoping that in this miracle insecticide the codling moth will meet its Waterloo. To combat everything, an average of nine sprays is used each year.

(Continued on page 29)

A combination cold storage and packing plant on a railroad siding near the Berryville Orchard.

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State News

(Continued from page 26)

trees on dwarf root stocks have suffered most severely. There is some concern about the possible winter injury that may result in areas where the drought has been most severe.

The McIntosh apple drop started in southern Connecticut about September 5 and has been rather serious especially in the worst drought areas. The harvest labor problem is acute, with a particular shortage of men who can handle picking ladders.

The apple crop for the state as a whole is especially clean of insect and disease damage this year.—H. A. Rollins, *Extension Fruit Specialist, Storrs.*

IOWA—Our commercial apple crop this year is about 10 or 15 percent more than last year's very small crop. The Armistice Day storm of 1940 wiped out most of the commercial orchards in western Iowa and many in central Iowa. It also caused damage in many orchards in southeastern Iowa. Today, most of our commercial production is located in several counties in southeastern Iowa, with some scattered as far northwest as the center of the state. Bloom prospects were fine this spring but poor pollinating weather and cold weather before blossoming time greatly reduced the set of fruit. No orchard has a full crop. However, many growers have good prospects for a crop this fall.

Scab caused considerable loss in many orchards but in others it was well controlled.

Color should be good. Size apparently is a little below average. On the whole, it is doubtful if Iowa has over 30 to 40 percent of a full crop on the trees now standing in commercial orchards. Practically all the crop will be disposed of locally.—H. E. Nichols, *Extension Horticulturist, Ames.*

MARYLAND—Continued dry weather and late codling moth injury have left the growers in the Virginias, Pennsylvania and Maryland with a heavy crop of very small apples. At present, there are several plans by which these apples may be worked into the fresh fruit and processing trade, but it appears as if there will be a great amount of this small stock left without a home in any market.

After the long dry period, Maryland was drenched with a three-day rain but it was too late to help size the apple crop to any extent. In some sections there was fear that the rain might cause heavy cracking of fruit. Only time will give the answer to this prediction.

The peach crop was moved surprisingly well, in spite of a short labor supply. Orchard and packing house help was drawn from many sources and though the job was not perfect, the crop moved to market in rather good shape. It is felt that the apple harvest labor supply will be short, but there is hope of finding a lot of labor that is not evident at present. Depend upon fruit-growers everywhere to get the job done, in spite of handicaps.—A. F. Vierheller, *Extension Horticulturist, College Park.*

WASHINGTON—The 4th Annual Field Day at the Tree Fruit Branch Experimental Station at Wenatchee, Washington last month was attended by an interested group of horticulturists who felt fortunate in having an opportunity to go over in detail experimental work being done at the Experimental Station.

The experiments dealing with the pruning of mature cherry trees and training young cherry trees were observed. Some large cherry trees were pruned last February. The pruning consisted of the removal of several large leaders. Cuts were made well down into the tree so that the removal of these branches substantially reduced the heights of the trees. These trees, so pruned, responded by making considerable growth in the regions of the cuts. The terminal growth in other parts of the tree did not appear to be affected appreciably. The possibility of stimulating terminal growth in regions distant from the points at which the cuts were made was suggested. Some growers reported that rather severe pruning during the dormant period along with heavy applications of fertilizer high in nitrogen gave excellent results in stimulating new growth throughout the tree.—John C. Snyder, *Extension Horticulturist, Pullman.*

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

OF AMERICAN FRUIT GROWER, published monthly at Cleveland, Ohio, for October, 1944.

STATE OF OHIO
COUNTY OF CUYAHOGA } ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared E. G. K. Meister, who, having been duly sworn according to law, deposes and says that he is the Business Manager of the AMERICAN FRUIT GROWER and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, American Fruit Grower Publishing Company, 1370 Ontario St., Cleveland, Ohio; Editor, J. H. Gourley, 1370 Ontario St., Cleveland, Ohio; Managing Editor, None; Business Manager, E. G. K. Meister, 1370 Ontario St., Cleveland, Ohio.

2. That the owner is: "If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

American Fruit Grower Publishing Company, 1370 Ontario St., Cleveland, Ohio; E. G. K. Meister, 1370 Ontario St., Cleveland, Ohio; R. B. Campbell, Richmond, Virginia.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the twelve months preceding the date shown above is.

(This information is required from daily publications only.)

E. G. K. MEISTER,
Business Manager.

Sworn to and subscribed before me this 19th day of September, 1944.

(Seal) H. Willkom, Notary Public.
(My commission expires November 13, 1944).

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HOW RED IS MY VALLEY

(Continued from page 27)

No story of the Byrd orchards would be complete without at least brief mention of the Byrd family. Virginia Byrds are descendents of what is called the Three Williams. William Byrd I came to Virginia in 1674, built a sizable fortune and sired the famous William II. The latter was a man of influence in the colony but is known now mainly for a house he built and a book he wrote. The house was beautiful Westover, now owned by the Bland family; the book, his famous diary that is an invaluable source book of Colonial history. William III dissipated the family fortune and committed suicide in 1777. His sons drifted over the South, one branch going to Texas. Here in 1860 was born Richard Evelyn Byrd who attended the University of Virginia and settled in the Shenandoah. Richard Evelyn had three sons, the eldest whom he named after his brother-in-law, Henry D. Flood; the second after himself, and the third after a maternal ancestor, Thomas Bolling. These are the famous Tom, Dick and Harry of the present Byrds. Dick is now an admiral with the Pacific fleet and Tom is associated with the Senator in his vast apple growing business. Six feet one inch and weighing 195, Thomas Byrd has the traditional Byrd physique that the Senator lacks. He was a lawyer before giving up his practice to join his brother.

Senator Byrd, in turn, has three sons, Harry, Jr., Beverley and Richard. Lieutenant Harry Byrd is with the Pacific fleet, the other two with the Army in France.

The first factor to keep in mind in appraising Harry Byrd—or any Byrd for that matter—is that he is first and foremost a Virginian. Actually, he was born on the West Virginia side of the line, but that is just one of those accidents that might happen to anyone. His civic career was prompted by love of Virginia and his apple growing has now turned largely into a settled project of building up an important Virginia industry. He doesn't grow apples so much as he grows *Virginia* apples.

This love of his ancestral land can be illustrated by the following story: A man died and was being shown around Heaven by one of St. Peter's emissaries when he noticed a building of unusual beauty in the distance. Asking what it was, he was told that it was the home of the Virginians. Inspecting it, he noticed that its occupants were the most handsome and distinguished looking in all Heaven, but that each was chained to some pillar or other part of the building. Perplexed, he asked his guide if these people were unruly or troublesome, but was told that they were the best behaved people up there. "Why, then, do you put chains on them?" he asked. "We do that," said his celestial guide, "to keep them from going back to Virginia."

When Harry Byrd gets to Heaven a double weight chain will be needed to keep him from heading straight for the Shenandoah to direct the planting of another 10,000 apple trees.

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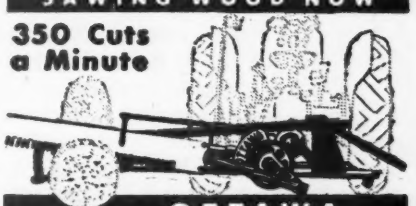

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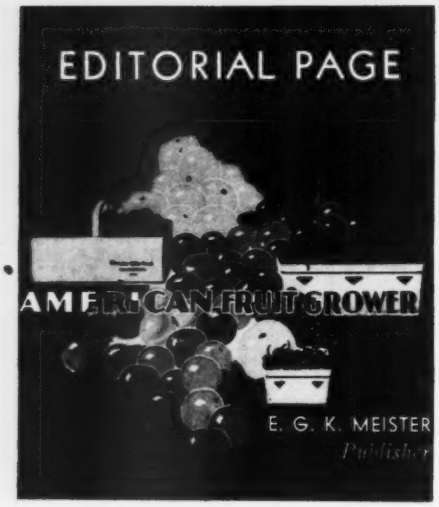

Frozen Nectarines

NO fruit they had ever tested had come through so well as frozen nectarines, Dr. J. H. Clark of New Jersey told a round table discussion at the recent convention of the American Society for Horticultural Science in Cleveland. Nectarines of the Garden State variety were cut in half and placed in syrup. When used they had retained almost perfect color and other qualities of fresh fruit.

This remark about nectarines symbolized repeated reference to the growing importance of fruit freezing. The modern food locker is the answer to those pessimists who have been predicting dangerous fruit surpluses. Such surpluses may well come in some food items. The human animal needs only so much nourishment. But such delicacies as peaches, nectarines and most of the berries will be far down on the list. Nature and fruit breeders have done too perfect a job.

No DDT in 1945

WHILE there has been no official announcement, strong intimations have been given out that no DDT will be available for general public use as an insecticide for either fruits or vegetables next year. There are several reasons for this. War priorities indicate continued demand by the military. The price of around $1.60 a pound makes it too expensive for general insecticide use, although there are indications that this price will come down under mass production. It is so powerful that entomologists are fearful that indiscriminate use might kill valuable as well as harmful insects.

But the chief reason is that medical men are not satisfied that wide use might not have harmful human effects. The very persistence of DDT that makes it potentially so valuable as an insecticide, leads medical men to fear the cumulative effects in the human system even if taken in minute quantities. This caution is wise. Fruit growers whose products go almost entirely for human consumption should be the last to protest infinite care in the protection of the consumer.

Liberty Hyde Bailey

A HIGHLIGHT of the Forty-first Annual meeting of the American Society for Horticultural Science held in Cleveland, Ohio, last month was the presence of Cornell's Liberty Hyde Bailey who dropped in unexpectedly at the annual banquet and made a few interesting comments on the present and future of horticulture.

Many of the younger men in horticulture had never had the opportunity to see and hear Dr. Bailey and they welcomed the chance to add another outstanding memory of the convention to carry home with them.

The philosophy of the 87 year old dean of American horticulture can best be expressed in his own beautiful language used in an earlier article for this magazine:

"Fifty years ago fruit growing was a home affair, identified with the tastes and emotions of the family, at the same time that it might be profitable. Now the uniform requirements of long-distance shipment, the education of purchaser in regularity by means of grades and standards and trademarks, the lack of a personal customer, I fear have taken some of the element of original inspiration out of the enterprise for both buyer and producer. It acquires something of the drive of big business. As orchards meeting the requirements of the day, the extensive plantations I saw recently are worthy of all admiration and I complimented the growers on their accomplishment, which is properly a source of pride. Success is always satisfying. Yet it is by no means certain that the present uniform massed production in manufacture and commerce, with outside regulation, is to be the predominating process of the future.

"I have no objection to standardized and massed production: I only refuse to accept the common assumption that it is the single destiny of trade and that the burden of teaching and public advice should be in market quotations, statistics, commodity movements, and immediate money-making. This attitude has special application to fruit growing because of the nature of the product itself. Fruit plants naturally yield a variable produce and there is special delight in the rearing and handling of these variables. We ought never to be so old but that we should like to grow a good variety of fruits or vegetables or flowers or even to sow seeds to produce new kinds. Otherwise, of what significance are the efforts of our experimenters to originate new varieties of fruits?

"The possibilities for sheer enjoyment in the raising of fruits are unimagined. Fruit growing is a wonderful and captivating subject, full of color, sunshine, and flavor, with variety and interest for every taste, albeit these rewards may be denied the people. I am convinced that we are not reaching the possibilities and full rewards in the growing of fragrant yields of the earth. We are not making the most of pomology. Emotion and not alone profit-and-loss is a guiding force in human development; it may be well expressed in good fruits of good variety."

Fruit growers over the nation can pause during these times of change and rapid scientific advance to weigh well these words of wisdom. We join with thousands in paying tribute to perhaps the greatest horticultural scientist America has ever produced.

Freight Subsidies Dropped

ONE of the commendable features of the price order on apples is the dropping of all freight subsidies for Western apples. While such subsidies may have served a useful purpose last year when the apple crop was phenomenally short, they represented a dangerous economic departure. The apple industry of the West grew up in the face of competition from other sections. To alter that competition by permanent subsidies would be unfair to the East and, in the long run, would only harm the West.

Banana Imports Increasing

ONE of the minor yet interesting reports at the International Apple Convention in Chicago was one on bananas by representatives of the United Fruit Company. By the end of this year banana imports are expected to be 55 percent of normal. Since America entered the war, an average of 23 million pounds of fruit each week has been destroyed because of transportation difficulties.

No fruit known is an adequate substitute for the banana. Here nature seems to have done almost a perfect job. Tangerine growers have attracted attention to their product lately by advertising it as the fruit with the "zipper skin." The banana doesn't have to advertise such a quality. No zipper ever made operates as smoothly as a banana peel.

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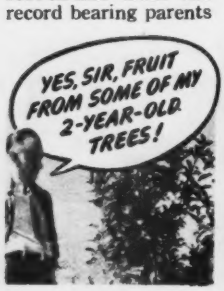

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